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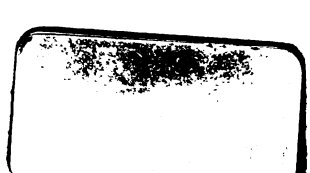

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THE

MORSE SPELLER

DICTATION AND SPELLING IN CORRELATION WITH OTHER SUBJECTS FOR ALL GRADES

BY

SAMUEL T. DUTTON

SUPERINTENDENT OF SCHOOLS, BROOKLINE, MASS.

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PREFACE.

THE only excuse for adding another to the list of spelling-books, already large, is that in the development of educational methods certain principles have been established, which, if fully recognized, will tend to make teaching less mechanical, more interesting and more effective.

In view of the place that the written exercise is acknowledged to have in teaching spelling, this work is made to contain a large number of carefully selected and well-graded lessons for dictation.

The claims of *correlation* are recognized in the use of instructive material bearing largely upon the subjects pursued in the schools. Thus many important facts and central truths are economically impressed. In the slow and laborious task of gaining a working vocabulary, the potency of *interest* is not disregarded.

Special care has been taken in the selection, from English and American authors, passages of great moral and æsthetic value. These are to be used not only as dictation exercises, but also as memory gems.

At intervals, lists of words are given as *review* lessons. These may be used by the teacher, according to his judgment, as oral lessons, or may be dictated in sentences of his own forming. Lists of new words are added for use as occasion may require.

Most of the technicalities and perplexities of our language, made so prominent in some spelling-books, have been scrupulously omitted. The aim here is to have spelling ability acquired by practice, under the stimulus of thought and interest.

The book is divided into four parts. Part I. is intended for pupils of the second and third years or grades; Part II. for fourth and fifth grades; Part III. for sixth and seventh grades; and Part IV. for eighth and ninth grades.

Acknowledgments are due to Miss Harriet E. Moses, of the Lawrence School, Brookline, for valuable assistance in the preparation of these lessons.

The selections from the writings of Emerson, Longfellow, Whittier, Holmes and Fisk are used by the kind permission of Messrs. Houghton, Mifflin & Co.

SAMUEL T. DUTTON.

SUGGESTIONS TO TEACHERS.

It is hoped that the attempt to furnish spelling lessons, in the form of exercises for dictation, will be appreciated. It is believed, also, that the omission of technicalities of every sort will be approved.

This is neither a language book, a grammar nor a dictionary. It is a speller, and, if faithfully followed, will teach children to spell. The plan is exceedingly simple. At the close of every exercise, let the next one be read, so that any questions concerning the meaning or pronunciation may be answered.

The pupils are to carefully study, and, in the earlier stages of the work, are to write the exercises. In the recitation, teachers are to dictate each sentence or phrase once only, with distinctness, thus training to habits of attention and application.

The review lessons contain words found in the preceding exercises, and may be used for oral review, if desired.

The *selected words* are new, and it is recom-

mended that pupils be required to write them in sentences.

It is believed that the faithful use of this book will give what the old-fashioned speller failed to give, *viz.* the possession of a good working vocabulary along the line of the studies pursued in the schools, as well as upon practical everyday subjects.

It is assumed that the exercises bearing upon geography, science and history will not be used until those subjects have been taught.

The table of contents will aid the teacher in this connection.

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PART I.

LESSONS FOR COPYING AND DICTATION.

I.

The dog is a kind and useful pet.

He can run very fast.

Some dogs are very strong and can draw a cart.

A good dog loves his master and takes care of him.

Dogs love those who treat them kindly.

II.

The cow eats hay and grass.

She has many large teeth in her mouth.

Some cows have long hôrns.

Do you like milk to drink?

Butter and cheese are made from milk.

The cow has large, gentle eyes.

III.

The horse is a very useful animal.

He can carry a man on his back and can draw a heavy load.

A child likes a small horse which is called a pony.

I like to brush my pony and keep his coat smooth.

IV.

The ant is a busy little insect.

Ants build their houses of sand with much care.

It is great fun to watch them at work.

They gather food and carry it into their houses.

They sometimes help each other when the load is heavy.

V.

The bee is another wise and busy insect.

Bees get honey from the flowers and store it up for the winter.

Did you ever look into a bee-hive?

How neat and clean the bees keep their homes.

The queen bee has small wings and does not often leave the hive.

The work-bees fly far away and bring home their honey.

VI.

The squirrel is a playful little animal.

He has bright eyes and a soft fur coat.

Did you ever see a squirrel eating a nut?

His teeth must be very sharp.

The squirrel lives in trees and makes his nest of leaves.

Do not throw stones at the squirrels that live in your yard.

VII.

In the spring the days grow longer and we see the green grass.

The sun is bright and the air is soft.

The little buds on the trees begin to grow and the green leaves soon come out.

How pleasant it is to see the spring flowers.

Soon Mother Earth will have a new spring dress.

VIII.

One of the first spring flowers is the violet.

It is purple and has a slender stem.

It likes to grow in the woods.

We can see many little seeds up in the maple tree.

They hold on by their stems.

They have little wings and will soon fly away.

IX.

We will plant a bean in the soft earth.

The sun makes the ground warm and the raindrops make it moist.

Soon Mr. Bean comes peeping from his bed.
He wants to climb up into the sunshine.
Sometimes he grows to be very tall.
See those little bean pods.
Each pod has five little beans in it.

X.

God made the sky that looks so blue,
He made the grass so green;
He made the flowers that smell so sweet,
In pretty colors seen.

—*Jane Taylor.*

XI.

I can hear frogs croaking in the pond.

They seem to be very happy because spring has come.

Did you ever see a frog dive into the water?

Do you like to see boys throw stones at the frogs?

Have you heard the story about the frogs who wanted a king?

XII.

The robin comes early in March and stays until fall.

She builds her nest in the trees.

It is made of straw and mud.

The robin sings sweetly early in the morning.
Have you seen her pretty blue eggs in the nest?
Please do not touch them.
When the little robins come, the mother bird brings food for them.

XIII.

Tongues to talk have you and I;
God has given the little fly
No such things, so he sings
With his buzzing wings.

XIV.

When the spring is gone summer comes.
Now the trees are full of leaves.
The little baby plants are getting quite strong.
The sun and the rain help them to grow.
They grow at night while you and I are asleep.
Sometimes it is too hot to play in the sun.

XV.

Who is that working in the field?
It is a farmer. He is digging up weeds among the corn. When it is noon he goes home for dinner. When the sun goes down he drives home the cows and milks them. He goes to bed early at night and rises with the sun.

XVI.

What are these men doing? They are cutting grass and drying it in the sun. This is the way to make hay. When it is dry they rake it and carry it into the barn. When winter comes the cattle and horses will have sweet hay to eat. It is great sport to ride into the barn on a load of hay.

XVII.

We tread through fields of speckled flowers,
As if we did not know
Our Father made them beautiful
Because He loves us so.

—*Alice Cary.*

XVIII.

All people like to spend the summer in the country. They like to be among the trees and flowers. The song of the birds seems like sweet music. They enjoy riding over the hills and through the forest. Sometimes they climb a high mountain. They always come home very hungry.

XIX.

Did you ever go fishing in the lake?

How smoothly the boat glides through the water. We use oars to row with. Now put

some bait on your hook and drop it into the water. When a fish bites, try and pull him into the boat.

How hard he tries to get away.

Is there any better fun than this?

XX.

What are those white spots on the water? Let us row to them and see. They are beautiful white flowers. They are called pond-lilies. See what long stems they have. Did you ever smell anything so sweet? Let us carry some home with us.

XXI.

How quickly the summer has gone. Now autumn has come. The plants have nearly finished their work. They have made many seeds. They will soon lose their leaves. The roots of some plants keep alive all winter. The leaves of some trees turn beautiful, bright colors. When they have all fallen off, the trees look as if they were dead. They are only sleeping until the winter is over.

XXII.

The weather is cool in autumn.

Jack Frost is busy every night. He opens the

prickly houses in which the beech-nuts live. Soon the little nuts fall to the ground. Jack Frost also turns the little chestnuts out of doors. The squirrels carry them away to their nests. Boys and girls also are fond of gathering chestnuts.

XXIII.

In the autumn the farmer gathers apples, pears, plums, grapes and peaches. He carries some of them to the market. He gathers the corn and other grains into his barn. Did you ever help to husk corn? It is pleasant to see yellow ears of corn in a great heap. When the corn is ground it is called meal. When wheat is ground it is called flour.

XXIV.

Gone hath the spring with all its flowers,
And gone the summer's pomp and show.
And autumn in his leafless bowers,
Is waiting for the winter's snow.

—*John G. Whittier.*

XXV.

Winter is the coldest season of the year. The days are much shorter than in summer. The earth wears a soft, white blanket. It is called snow. How well Mother Nature takes care of her children. She sends the snow to keep the

little plants warm. They sleep through the long, cold winter. See the frost on the windows. How it sparkles in the sunlight.

XXVI.

How the wind blows the snow about.

It is fun to wade through the drift.

Did you ever take a sleigh-ride?

Who does not like to hear the sleigh bells?

The pond is covered with thick ice. It is so smooth one can skate very fast. Let us build a fire on the ice. How cheerful it makes the dark night.

XXVII.

Christmas is the best day of winter.

One of my presents was a pair of new skates. My brother John had a sled and a knife. One stocking was full of popcorn. We had dinner with grandmother and grandfather. I wish you might have seen the plum pudding. After dinner we played games and sang songs. When we drove home the moon and stars shone brightly.

XXVIII.

The frost looked forth one still, clear night,
And whispered: "Now, I shall be out of sight,
So through the valley, and over the height,
In silence I'll take my way."

—*H. F. Gould.*

XXIX.

Our house is on Harvard Street. It is painted white and has green blinds. A broad walk leads to the front door. There is a wide hall with two rooms on each side. At the end of the hall is a pair of stairs. A tall clock stands on the landing. One front room is the parlor, the other is the study. Next to the study is the kitchen, and back of the parlor is the dining-room.

XXX.

In the parlor I can see five chairs, a sofa and a piano. The walls are covered with a light paper. In one corner of the room is a table. On the table are some books and a lamp. There is a soft, blue carpet on the floor. A little girl is playing on the piano. Now let us look into the study.

XXXI.

Here are many shelves filled with books. Father sits in this arm-chair at his desk. Coal is burned in the grate. Jane sweeps and dusts every morning. Every Saturday she cleans the windows. Walk up stairs and look into one of the chambers. The furniture is all painted white. There is a pretty rug on the floor. The curtains are white muslin.

XXXII.

The bell rings for breakfast. We are all ready. Will you have an orange? No, I thank you. I seldom eat fruit. The coffee is hot. I like beef-steak and potatoes. Please hand me the salt and pepper for my egg. I prefer toast to rolls. Where is my teaspoon? Now we must go to school.

XXXIII.

Dinner is ready. How hungry we all are. Be careful and do not spill your soup. I think this bread is new. Where is my napkin? You must have dropped it on the floor. Will you have beef or mutton? Please give me also peas, corn and squash. For dessert we have pudding and pie.

XXXIV.

What a pleasant school-room. There are forty pupils in the third grade. The desks are made of maple. Some fine pictures hang on the walls. The teacher sits in an arm-chair. At ten o'clock we sing songs and play games. We learn our lessons and then read a story book. Our teacher is kind and we try to help her.

XXXV.

In the village is a large store. What do we need this morning? Coffee, sugar, salt and flour. The clerk will grind the coffee and put it in a paper bag. How heavy the flour is. The flour costs $1.20, the coffee, .40, the sugar, .30, and the salt, .10. How much does it all cost? Now we must hurry, or we shall be late for dinner.

XXXVI.

Little deeds of kindness,
Little words of love,
Make our Earth an Eden,
Like the heaven above.

XXXVII.

The Indians once lived in these forests. Their houses were made of bark and boughs and were called wigwams. They painted their faces and put feathers in their hair. The Indian wife was called a squaw. She did all the hard work. The men used the bow and arrow in hunting. The Indian boat was made of birch bark and was called a canoe.

XXXVIII.

The Indians had no schools or churches.

The Indian boys learned to hunt and fish, but

did not learn to read or write. When white men first came to the country they found many tribes of Indians. Some were kind and brought them corn and fish to eat. I am sorry some white men treated the Indians badly and drove them from their lands.

XXXIX.

Let us look at this fine maple tree. Its parts are the roots, the trunk, the branches and the leaves. In the centre of the trunk is the pith. Around the pith is the wood, which is hard, and on the outside is the bark. If we cut across the trunk we find a number of circles. Each circle shows how much the tree grew in one year.

XL.

The stem of the leaf is called its petiole. The petiole, in the maple leaf, is green. The five large branches in the blade are called veins. The mid-vein runs from the petiole through the middle of the blade. The part of the leaf next to the petiole is called its base and the other end is its apex.

XLI.

Woodman, spare that tree!
Touch not a single bough!

In youth it sheltered me,
And I'll protect it now.
'Twas my forefather's hand
That placed it near his cot:
There, woodman, let it stand;
Thy ax shall harm it not.

—*George P. Morris.*

XLII.

A little fly sat down to rest upon the head of an ox. Just as he was about to fly away he said to the ox: "Perhaps you would like to have me go now?" "I did not know you were there," said the ox. "Go when you get ready." The little fly thought a great deal of himself.

Have you ever seen people who were like him?

XLIII.

"A little boy was dreaming
Upon his mother's lap,
That the pins fell out of all the stars,
And the stars fell into his cap.

"So when his dream was over,
What should that little boy do?
Why, he went and looked into his cap
And found it wasn't true."

XLIV.

A little light once fell in love with itself. It thought the sun, moon and stars were no brighter.

Many times it said to other people, "See how bright I am!" Once when it had said this, the wind blew just a little, and out it went. A man had to light it again, and as he did so, he said, "The stars never go out."

XLV.

"I cannot do much," said a little star,
"To make the dark world bright,
My silver beams cannot pierce far
Into the gloom of night;
Yet I am a part of God's great plan,
And so I will do the best I can."

XLVI.

An old man found a bad boy stealing apples in one of his trees. When told to come down, he did not obey. The old man threw grass at him, but this only made the boy laugh. "Very well," said the old man, "I will try throwing stones." This soon brought the boy down from the tree. He asked the old man's pardon.

XLVII.

A lion was sleeping under an oak tree. Some little mice ran over his back and waked him. He put his great paw upon one of them, but let him go as the mouse begged for his life. Soon after

this the lion fell into a hunter's net and began to roar loudly. The mouse heard his voice and, like a good friend, went and began to gnaw the knots of the net until the lion was free.

XLVIII.

"Be kind to all you chance to meet,
In field or lane or crowded street;
Anger and pride are both unwise,
Vinegar never catches flies."

XLIX.

In a certain house were many mice. A cat was found who began to catch and eat some of them. Upon this the mice no longer came down from the upper shelf. The sly, old cat hung by her hind legs from a peg on the wall and seemed to be dead. A cunning old mouse looked over the edge of the shelf and said, "I would not trust you even if your skin were stuffed with straw."

L.

"The cunning old cat lay down on a mat
By the fire in the oaken hall;
'If the little mice peep, they'll think I'm asleep;'
So she rolled herself up like a ball.

"Nibble, nibble, nibble, went the mice,
And they licked their little paws;
Then the cunning old cat sprang up from the mat,
And caught them all with her claws."

LI.

That part of the earth, in which plants grow, is called soil. If we dig through the soil we always find rocks. One very common rock is called granite. This contains three kinds of crystals—quartz, felspar and mica. Metals are found deep in the ground, where they form veins.

LII.

Little by little the great rocks grew,
Long ago when the earth was new;
Slowly and silently, stately and free,
Cities of coral under the sea
Little by little are builded, while so
The new years come and the old years go.

LIII.	LIV.	LV.
dog	large	brush
kind	teeth	keep
useful	mouth	coat
pet	some	smooth
run	long	called
fast	horns	ant
strong	milk	busy
can	drink	little
draw	butter	insects
cart	cheese	build
good	made	their
love	from	house
very	gentle	sand
master	eyes	with
take	horse	much
care	animal	care
him	carry	great
those	man	fun
treat	back	watch
them	heavy	work
cow	load	gather
eat	child	food
hay	small	sometimes
grass	pony	help
many	which	each

LVI.	LVII.	LVIII.
bee	sharp	first
another	nut	violet
wise	live	purple
honey	tree	slender
flower	nest	woods
store	leaf	maple
winter	throw	seed
look	stone	hold
hive	your	stem
neat	yard	plant
clean	spring	bean
queen	day	ground
small	grow	warm
wings	longer	raindrops
leave	green	moist
often	air	peeping
fly	bud	bed
far	come	want
away	out	climb
home	pleasant	sunshine
squirrel	see	tall
playful	mother	beanpods
bright	earth	five
soft	new	God
must	dress	blue

LIX.	LX.	LXI
smell	morning	field
sweet	egg	farmer
pretty	please	digging
color	bring	weed
hear	tongues	corn
frog	talk	when
croaking	given	noon
pond	such	among
because	thing	goes
dive	buzzing	dinner
water	gone	drive
boy	summer	rises
heard	full	men
story	baby	cutting
king	plant	drying
robin	quite	rake
early	strong	barn
March	rain	winter
stay	night	cattle
until	while	sport
fall	asleep	ride
build	hot	tread
mud	play	speckled
straw	who	father
sing	that	beautiful

LXII.	LXIII.	LXIV.
people	bite	prickly
spend	try	beach
country	pull	also
among	hard	chestnuts
song	better	girls
seem	white	fond
music	spot	apple
enjoy	pond-lilies	pear
through	quickly	plum
forest	autumn	grapes
forefathers	nearly	peaches
high	finished	market
mountain	lose	grain
hungry	root	husk
ever	alive	yellow
fishing	turn	ear
lake	bright	heap
boat	fallen	meal
glide	dead	wheat
use	sleeping	flour
oars	weather	hath
row	cool	pomp
bait	Jack Frost	show
hook	every	snow
drop	open	coldest

LXV.	LXVI.	LXVII.
month	knife	door
year	stocking	there
shorter	popcorn	hall
wear	grandmother	wide
blanket	grandfather	two
children	might	room
warm	pudding	each
window	game	side
sparkle	moon	end
wind	stars	stairs
blow	shone	tall
about	forth	clock
wade	still	stand
drift	clear	landing
sleigh-ride	whispered	parlor
skate	sight	other
fire	valley	study
ice	height	next
cheerful	silence	kitchen
Christmas	painted	back
best	blinds	dining
present	broad	chair
pair	walk	sofa
sled	lead	piano
brother	front	wall

LXVIII.	LXIX.	LXX.
covered	breakfast	dessert
paper	ready	pie
corner	orange	forty
table	thank	pupil
book	seldom	third
lamp	fruit	grade
carpet	coffee	desk
shelves	beefsteak	harm
sit	potatoes	picture
arm-chair	hand	hang
fire	salt	wall
coal	pepper	ten
grate	teaspoon	o'clock
burn	school	learn
sweep	oatmeal	lesson
dust	careful	read
Saturday	spill	teacher
chamber	soup	village
furniture	break	need
pretty	napkin	sugar
rug	dropped	salt
curtain	floor	clerk
muslin	mutton	grind
ring	peas	cost
bell	squash	hurry

LXXI.	LXXII.	LXXIII.
iate	canoe	blade
deed	church	vein
kindness	fish	middle
word	write	next
Eden	tribes	base
heaven	brought	other
Indians	sorry	end
once	treated	apex
forest	badly	woodman
bark	drove	spare
boughs	land	touch
wigwam	look	single
painted	part	youth
face	trunk	sheltered
feather	branches	protect
hair	centre	fly
wife	pith	sat
squaw	around	down
work	outside	rest
used	cut	head
bow	across	ox
arrow	number	just
hunting	circle	perhaps
boat	grew	would
birch	petiole	know

LXXIV.	LXXV.	LXXVI.
thought	best	meat
deal	stealing	lane
himself	obey	crowded
dreaming	laugh	street
lap	pardon	anger
pins	lion	pride
fell	oak	unwise
cap	mice	vinegar
should	back	catch
why	waked	flies
went	paw	certain
true	mouse	began
light	begged	upper
itself	life	sly
times	hunter	hind
blew	net	peg
never	roar	leg
dark	loudly	cunning
world	voice	edge
silver	good	trust
brand	friend	skin
pierce	gnaw	stuffed
gloam	knot	straw
yet	free	mat
plan	chance	fire

LXXVII.

rolled	rock	metal
ball	granite	ground
nibble	common	slowly
licked	contain	silently
sprang	crystal	stately
caught	quartz	cities
claws	felspar	coral
soil	mica	sea

SELECTED WORDS TO BE WRITTEN IN SENTENCES BY THE PUPIL.

LXXVIII.

melt	dollar	fair	shade
own	wait	sell	saucer
agree	fare	barrel	plate
urge	cheap	deer	loaf
plenty	owe	fail	die
ease	tight	roam	heel
again	cell	toast	fuel
sew	keen	china	least
bound	cheat	jelly	mist
reed	bargain	sauce	dye
value	cent	weak	scour
sorry	gallon	hour	hedge

LXXIX.

LXXX.	LXXXI.	LXXXII.
height	cloak	kite
fight	gloves	shovel
lawn	mittens	engine
breadth	cones	crayon
shoot	clover	chalk
smoke	asters	tray
pity	glossy	flag
meek	nail	blunt
marsh	stove	towel
notice	crack	gutter
search	cousin	track
road	uncle	crocus
flood	aunt	dandelion
ditch	sleigh	toad
rowed	yesterday	crow
raise	evening	alder
choice	hood	worm
shallow	whale	berries
judge	geese	toes
squall	tallow	beak
apron	moss	vacation
dull	cradle	haste
comb	stage	freeze
stockings	thimble	cure
rubbers	blocks	cube

LXXXIII.	LXXXIV.	LXXXV.
scrap	sketch	parents
knob	stitch	letter
notch	wreck	awl
crutch	throat	broil
crumb	porch	brute
staff	rogue	awful
dare	choke	axis
bruise	ghost	strain
shawl	twist	arbor
verse	order	stripe
pearl	honesty	nurse
arch	fierce	straw
starch	wrist	axle
dwarf	quince	aloft
starve	prize	streak
vault	defeat	camp
birth	wisdom	cosy
worse	lettuce	sum
pansy	stupid	question
feast	dunce	mark
skein	capital	fact
speech	base-ball	flash
badge	waves	track
match	grey	tramp
barge	proper	band

LXXXVI.	LXXXVII.	LXXXVIII.
plank	poet	other
officer	lady	doll
bleak	coin	goat
lease	open	pew
check	cord	dime
lend	fable	scald
theme	candle	carve
college	skip	wool
bridge	slide	cradle
bath	tart	crib
tent	muff	pewter
flock	lace	tongs
bunch	silk	wharf
toy	wolf	dipper
wren	bug	peanut
chart	duck	eager
map	owl	rooster
crew	fog	wolf
kitten	noon	fairy
peak	bank	pussy
team	fort	pile
float	peace	crow
chase	war	rabbit
pain	army	doves
purse	host	guess

PART II.

I.

In a good school, teacher and pupils help each other. All find pleasure in performing hard tasks. Pupils are diligent and do not disturb those near them. All lessons are faithfully learned. The school-room is tidy and there are growing plants in the windows. Books are handled with care and so are neither torn nor soiled.

II.

The girls and boys that do their best,
  Their best will better grow,
But those who slight their daily task,
  They let the better go.
What if your lessons should be hard,
  You need not yield to sorrow;
Work bravely at your task to-day,
  'Twill lighter be to-morrow.

III.

When we do anything over and over again we form a habit. Children are ever forming habits, either good or bad. We form habits of standing, walking and sitting; of speaking, writing and reading. If we always do our very best, our habits will be good. If we are lazy and careless, our habits are sure to be bad. Character has been said to be but a bundle of habits.

IV.

The tissue of the life to be
We weave with colors all our own,
And in the field of Destiny,
We reap as we have sown.

—*Raphael.*

V.

Good health is the secret of happiness. Eat plain food, go to bed early, play out of doors, and you will be healthy. Children who have good health enjoy their school. At recess they love to run, jump and shout. In the school-room they can study hard and not feel tired. Healthy boys and girls grow to be strong men and women. Some people are never ill, because they take care of their health.

VI.

We live in deeds, not years ; in thoughts, not breaths ;
In feelings, not in figures on the dial.
We should count time by heart-throbs. He most lives
Who thinks most, feels the noblest, acts the best.

—*Bailey.*

VII.

How little we can accomplish without the help of others. We depend upon others for the food we eat and the clothes we wear. Our breakfast, dinner and supper are made up of things that come from many countries. We rely upon the farmer, the sailor and the merchant to provide for our wants. The whole world is a busy hive of workers.

VIII.

No longer let me shun my part
  Amid the busy scenes of life,
But with a warm and generous heart
  Press onward in the glorious strife.
—*J. H. Bryant.*

The meal unshared is food unblest;
  Thou hoard'st in vain what love should spend;
Self-ease is pain; thy only rest
  Is labor for a worthy end.
—*Whittier.*

IX.

My son, forget not my law, but let thine heart keep my commandments; for length of days and long life shall they add to thee.

Let not mercy and truth forsake thee; bind them about thy neck; write them upon the table of thy heart. So shalt thou find favor and good understanding in the sight of God and man.

X.

I count this thing to be grandly true:
  That a noble deed is a step toward God—
  Lifting the soul from the common sod
To a purer air and a broader view.
—*Holland.*

XI.

A good name is rather to be chosen than great riches.

By humility and the fear of the Lord, are riches and honor and life.

Boast not thyself of to-morrow, for thou knowest not what a day may bring forth.

Let another man praise thee, and not thine own mouth: a stranger, and not thine own lips.

XII.

Within himself he found the law of right,
He walked by faith, and not the letter's sight,
And read his Bible by the Inward Light.
—*Whittier.*

XIII.

There are three kingdoms of nature—the animal, vegetable and mineral. Most of our food comes from the animal and vegetable kingdoms. The means by which we obtain vegetable products from the earth is called agriculture. It is interesting to know that different kinds of food contain the same elements.

XIV.

Nature, like a loving mother, is ever trying to keep land and sea, mountain and valley, each in its place, to hush the angry wind and waves, balance the extremes of heat and cold, of rain and drought, that peace, harmony and beauty may reign supreme.—*E. C. Stanton.*

XV.

Milk, butter and cheese form an important part of our diet. They are called dairy products. With bread, we could live on these alone. Milk varies in quality, according to the food given to the cows. With the old-fashioned churn, two or three hours were required to produce but-

ter. Now it is made by means of a machine in a few minutes. One pound of cheese contains as much nourishment as two pounds of beef.

XVI.

The most ancient of the cultivated fruits is the grape. Certain kinds of grapes, by being dried in the sun, can be converted into raisins. Another variety furnishes the valuable fruit known as currants. I have read of a cluster of Hamburg grapes, the weight of which was thirteen pounds and four ounces.

XVII.

BOSTON, September 10th, 1896.

MR. HENRY W. SMITH,

Dear Sir:

Please send to No. 215 Maple st., 10 lbs. flour, 6 oz. black pepper, 3 doz. eggs, 5 lbs. oatmeal, 2 qts. milk, 3 gals. vinegar, 1 lb. crackers, and ½ doz. lemons.

Yours truly,

SARAH TURNER.

XVIII.

The earth is one of eight planets which are continually whirling about the sun. It is sometimes called a great ball of land and water, surrounded by a shell of air.

Great, wide, beautiful, wonderful world,
With the wonderful water round you curled,
And the wonderful grass upon your breast,
World, you are beautifully dressed.

XIX.

Sometimes the earth moves between the sun and the moon and casts a shadow on the moon. The edge of this shadow always looks like part of a circle. Do you know the shadow's name? Can you prove the earth round? What happens when the moon is between the earth and sun?

XX.

The oceans cover about three-fourths of the earth's surface. They wholly, or partly, separate the continents from one another. All water belongs to the ocean. The sun borrows it, the winds carry it, and the springs and rivers return it. We must thank the sun and wind for the rain and showers. Arms and passages of the ocean are classed as seas, gulfs, bays, sounds, and straits.

XXI.

The land has many valleys and mountains, so has the sea-bottom. Some mountains rise high above the surface of the sea. Their tops are called islands. The wind blows sand over the desert and also makes waves on the surface of the ocean, but the deep sea is always still. Strange plants and animals have lived and multiplied upon the land and in the water.

XXII.

Have you visited the beach or sea-shore?

Most parts of the sea near the land are shallow. Far from the shores the sea is in many places two miles deep, and in some places the bottom is four or five miles below

the surface. No sunshine reaches the deep parts of the sea. The deep water is always cold and dark.

XXIII.

Plants and animals live on the land. Seaweeds, fish, and many curious creatures abound in the shallow waters near the sea-shore. Fish are found in many lakes and rivers. Some kinds of fish are found in fresh water only, but others from the salt water go into the rivers to spawn or deposit their eggs.

XXIV.

Have you seen the "Big Dipper"? Can you use the pointers and find the North Star? Face the north. East is on the right, and west is on the left. Can you find north-east, south-east, south-west and north-west? About March 21st and September 22d the sun rises due east and sets due west. What happens, and why?

XXV.

A continent is not round; it is irregular in shape. We can find peninsulas and capes projecting from its coast. A high, rocky cape can be seen far out at sea. It is called a promontory. Can you think of a large peninsula? It is joined to other land by a narrow strip called an isthmus. What a queer name! It is a Greek word, meaning neck.

XXVI.

Shall we visit little boys and girls of other countries? Can we find children with black skins, woolly hair, flat

noses, and thick lips? Some children know how the tea-plant grows. Let our minds find the Negroes, Chinese, Turks, Arabs, Lapps, Finns and Esquimaux. We will ask the Lapps and Finns about the reindeer, and the Esquimaux about their dogs.

XXVII.

Mother Nature gives food to her baby seeds. Open a seed and find the meat. Plant many seeds and watch their growth. Can you find the germinating plantlet and the cotyledons? The cotyledons nourish the plantlet until Mother Nature gives it roots.

XXVIII.

"As wonderful things are hidden away
In the heart of a little brown seed,
As ever were found in a fairy nut
Of which children sometimes read.

"Over its pretty shining coat
We sprinkle the earth so brown,
And the sunshine warms its lowly bed,
And the rain comes dropping down."

XXIX.

Plants need light, heat and moisture. Do the plumule and radicle grow at the same time? Open the cotyledons and see the tiny plumule. The radicle is hiding itself in the soil while the little plumule is forcing its way upward into the beautiful sunlight.

XXX.

"Patter, patter, the soft, warm rain
Knocks at the tiny door,
And two little heads come peeping out,
Like a story in fairy lore.

"One is the Radicle creeping down,
At first but a wee, white root,
The other the Plumule: above the soil
It sends up a little green shoot."

XXXI.

We eat the fleshy roots of some plants. Have you eaten a beet, a radish or a carrot? The tender roots have mouths through which they absorb moisture from the ground. The roots of some plants live year after year; some die the second season, and others perish when Jack Frost finds them in the autumn.

XXXII.

"Steadily up toiled the slender stem,
And only its work it heeds;
A leaf appears, bud, blossoms and fruit;
Last of all come the little seeds.

"Then its work all done, if an annual,
It has had its brief, bright day,
And now at the touch of Frost-king's breath
It withers and fades away."

XXXIII.

Air is composed of oxygen and nitrogen. If one-fifth is oxygen, what part of the air is nitrogen? We cannot

see air. The air surrounding the earth is called its atmosphere. It is from 50 to 200 miles high. At the sea-level air is dense, on high mountains it is rare. Air in motion is called wind.

"The wonderful air is over me,
And the wonderful wind is shaking the tree;
It walks on the water, and whirls the mills,
And talks to itself on the top of the hills."

XXXIV.

An animal will die in nitrogen, not because nitrogen is a poison, but because the animal needs oxygen. Oxygen supports combustion. Our lives and the lives of plants and animals depend on the presence of oxygen. It is through its influence that fires blaze and lamps give light.

XXXV.

Water contains twice as much hydrogen as oxygen. Hydrogen is colorless and odorless. It is lighter than air. Balloons have been filled with hydrogen. If we place a burning match near the open end of a tube of hydrogen, and allow the hydrogen to unite with the air, an explosion occurs. Would miners be in less danger if hydrogen were not odorless?

XXXVI.

From marble we can obtain lime and carbon dioxide. In certain countries, carbon dioxide oozes from the earth. There is a grotto near Naples in which a man can walk, but it is not safe for a dog to enter. Carbon dioxide is heavier than air and it is a poisonous gas.

XXXVII.

Blood circulates through the body. Oxygen is taken into the lungs. It makes the blood red and the body warm. The body takes oxygen from the blood and gives carbon dioxide in return. We exhale impure air. It is unwise to breathe the same air over and over again.

XXXVIII.

Frozen water is called ice. Ice is lighter than water. We think of water as a liquid. We see it in the rivers, lakes, and ocean. The sun gives wings to the water and it flies away in the form of gas. When cool, we see it in the clouds, the dew, and the rain; when very cold, we look for frost and snow.

XXXIX.

Study the three parts of a candle flame—the inner cone, the middle cone and the outer cone. The inner cone contains an unburned gas. The middle cone gives light and heat, hydrogen burns and carbon glows. The outer cone gives little light and the greatest heat.

XL.

When Columbus explained his plans to the King and Queen of Spain, they were much interested. With the money which they gave him, he fitted out three small vessels and set sail across the Atlantic. On the twelfth of October, 1492, he discovered the New World. Columbus soon returned to Spain and carried some Indians with him. He was received with much honor by the King and Queen. He believed he had found India.

XLI.

So far as Columbus knew, no one had ever crossed the Atlantic Ocean, or even heard that it had any west coast at all. True, Norsemen had long before crossed northern portions of the Atlantic and discovered Iceland, Greenland and Vineland. But there is no evidence, so far as I am aware, that Columbus had ever heard of these discoveries. No; Columbus was inspired by faith, not by sight, not even by science.—*Boardman.*

XLII.

Immortal morn, all hail!
That saw Columbus sail
By Faith alone!
The skies before him bowed,
Back rolled the ocean proud,
And every lifting cloud
With glory shone.

XLIII.

The oldest settlement in the United States was made by the Spanish at St. Augustine, August 28, 1565. In 1605, the French planted a colony on the west coast of Nova Scotia. In 1609, Henry Hudson sailed up the river that now bears his name. He thought it a very beautiful river. The Dutch soon had large trade with the Indians.

XLIV.

An evil day came upon us. Your fathers crossed the great water and landed on this island. Their numbers were small. They found friends and not enemies. They told us they had fled from their own country for fear of

wicked men and had come here to enjoy their religion. They asked for a small seat. We took pity on them, granted their request, and they sat down amongst us. We gave them corn and meat; they gave us poison in return.—*Red Jacket* (1805).

XLV.

He learned of every bird its language,
Learned their names and all their secrets,
How they built their nests in summer,
Where they hid themselves in winter.
Of all the beasts he learned the language,
Learned their names and all their secrets,
How the beavers built their lodges,
Where the squirrels hid their acorns,
How the reindeer ran so swiftly,
Why the rabbit was so timid.

—*Longfellow.*

XLVI.

Queen Elizabeth helped to fit out several companies of men who made settlements in America. Sir Francis Drake was the first Englishman to travel around the world. He first explored the coast of California. Upon his return to England, he received great honors from the Queen. Sir Walter Raleigh made several voyages to the eastern coast of America.

XLVII.

In 1607, Captain John Smith came with three vessels and sailed up the James River. He selected for a settlement a place which was called Jamestown, in honor of their king. Smith made friends with the Indians and

governed the colony wisely. After his return to England there was much suffering, until ships came, bringing food and clothing. This was the beginning of the rich and powerful colony of Virginia.

XLVIII.

On December 21, 1620, the Pilgrims landed on Plymouth Rock. They built houses on the banks of a brook and surrounded the whole town with a stout, wooden fence. In the woods were deer and wild turkeys, and they found many kinds of fish in the sea, so that at first food was abundant; but the winter was very severe, and about half their number died before spring.

XLIX.

I see them, escaped from these perils, pursuing their all but desperate undertaking, and landing at last, after five months' passage, on the ice-clad rocks of Plymouth, weak and weary from the voyage, poorly armed, scantily provisioned, depending on the charity of their ship-master for a draught of beer on board, drinking nothing but water on shore, without shelter, without means, surrounded by hostile tribes.—*Edward Everett.*

L.

The breaking waves dashed high
  On a stern and rock-bound coast;
And the woods against the stormy sky,
  Their giant branches tossed;

And the heavy night hung dark
  The hills and waters o'er,
When a band of exiles moored their bark
  On the wild New England shore.

—*Felicia Hemans.*

LI.

William Penn founded a city named Philadelphia, which means brotherly love. It grew rapidly and in three years had six hundred houses. Many of these settlers were Quakers. Wharves were built on the banks of the river and soon many ships were seen there. Philadelphia has grown to be one of the largest cities of America.

LII.

In that delightful land which is washed by the Delaware's waters,
Guarding in sylvan shades the name of Penn, the apostle,
Stands on the banks of its beautiful stream the city he founded.
There all the air is balm and the peach is the emblem of beauty,
And the streets still re-echo the names of the trees of the forest,
As if they fain would appease the Dryads whose haunts they molested.

—*Longfellow.*

LIII.

Life in old colony times was full of hardships. The settlers had to protect themselves from the Indians and get enough to eat and to wear. The men raised hemp and flax, which the women made into clothes by spinning and knitting. They built the houses of logs and often had but two rooms. In one room was a big fireplace where the cooking was done. In the other were the beds and a ladder which led up to the garret.

LIV.

God bless our Fathers' Land!
Keep her in heart and hand
One with our own!

From all her foes defend,
Be her brave People's Friend,
On all her realms descend,
Protect her Throne!

Lord, let War's tempest cease,
Fold the whole Earth in peace
Under Thy wings!
Make all Thy nations one,
All hearts beneath the sun,
Till Thou shalt reign alone,
Great King of kings.

—*O. W. Holmes.*

LV.

In those days people met on Sunday in a log meeting-house. They carried their rifles with them, as the Indians sometimes attacked them suddenly. The men sat upon benches on one side of the church and the women on the other. The seats were not comfortable and all had to sit very still. The school-house also was made of logs and was warmed by a wide fireplace. There were few books, and the chief studies were reading, spelling and arithmetic.

LVI.

All the early settlers of New England paid great attention to instructing their children, first at home, or in the ministers' houses, and then in public schools. In 1647, the Massachusetts Colony passed a law providing that every township of fifty householders should appoint a schoolmaster to teach the children to read and write; and that his wages should be paid by the parents, or the public at large, according to the decision of the majority of the inhabitants.—*Campbell.*

LVII.

Hail to the land whereon we tread,
Our fondest boast;
The sepulchre of mighty dead,
The truest hearts that ever bled,
Who sleep on glory's brightest bed,
A fearless host!
No slave is here—our unchained feet
Walk freely as the waves that beat
Our coast.

—*J. G. Percival.*

LVIII.

In 1765, the English passed a law laying a tax on every newspaper and public document used in the colonies. The people were very angry and held meetings to protest against the law. They refused to use the stamp paper and burned it on the wharves. This law was repealed the following year. Parliament next aroused bitter feelings in America by putting a duty on tea. The people refrained from drinking tea and threw a whole cargo of it into the water of Boston Harbor.

LIX.

The voice of Patrick Henry from the mountains answered that of James Otis by the sea. Paul Revere's lantern shone along through the valley of the Hudson and flashed along the cliffs of the Blue Ridge. The scattering volley of Lexington Green swelled to the triumphant thunder of Saratoga.—*George W. Curtis.*

LX.

Then marched the brave from rocky steep,
  From mountain river swift and cold ;
The borders of the stormy deep,
The vales where gathered waters sleep,
  Sent up the strong and bold.

—*Bryant.*

LXI.

When in the course of human events, it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth the separate and equal station to which the laws of nature and nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to separation.—*Thomas Jefferson.*

LXII.

For thee we daily work and strive,
  To thee we give our love,
For thee with fervor deep we pray
  To Him who dwells above.
O God, preserve our Fatherland !
  Let peace its ruler be,
And let her happy kingdom stretch
  From north to southmost sea.

—*Anna Eichberg.*

LXIII.

Books are our most steadfast friends; they are our resource in loneliness; they go with us on our journeys; they await our return; they are our best company; they are a refuge in pain; they breathe peace upon our troubles;

they await age as ministers of youth and cheer; they bring the whole world of men and things to our feet; they put us in the centre of the world.—*T. T. Munger.*

LXIV.

The lovers of art are many, but the active intellect, the creative power—the power to put these shapes and images in art, to embody the indefinite, and render perfect—is his alone. He shares the gift with few. He knows not even whence or how this is. He knows only that it is; that God has given him the power which has been denied to others.—*Longfellow on the Artist.*

LXV.

Blessings on thee, little man.
Barefoot boy with cheek of tan!
With thy turned-up pantaloons,
And thy merry whistled tunes;
With thy red lips redder still
Kissed by strawberries on the hill;
With the sunshine on thy face,
Through thy torn brim's jaunty grace;
From my heart I wish thee joy,—
I was once a barefoot boy!

—*Whittier.*

LXVI.

Learn to be good readers, which is, perhaps, a more difficult thing than you imagine. Learn to be discriminative in your reading; to read faithfully and with your best attention, all kinds of things which you have a real interest in—a real, not an imaginary—and which you will find to be really fit for what you are engaged in.—*Thomas Carlyle.*

LXVII.

Efforts to be permanently useful must be uniformly joyous, a spirit all sunshine, graceful from very gladness, beautiful because bright.—*Thomas Carlyle.*

The talent of success is nothing more than doing what you can do well, and doing well whatever you do, without a thought of fame.—*Longfellow.*

LXVIII.

The relief and drainage of North America and South America are similar. Each grand division has a low mountain-system on the eastern and a high mountain-system on the western border. The highest mountains are always nearest the largest ocean. A great central plain extends from north to south. Compare the Mackenzie and Orinoco Rivers, the St. Lawrence and Amazon Rivers, and the Mississippi and Rio de la Plata Rivers.

LXIX.

The American eagle can view the relief and drainage of the United States from the sky. He sees the Atlantic Slope and Plain, Appalachian Mountains, Basin of the Mississippi River, The Plains, Rocky Mountains, Basin Region, Sierra Nevada Mountains, and the Pacific Slope. What a privileged eagle! He is wise, yet he cannot spell as well as a small boy.

LXX.

The Yosemite Valley is a deep gorge with vertical walls 4,000 feet high. During the wet season it abounds in cascades and cataracts, but during the summer many

of the river beds are dry. The Merced River plunges into a cañon, falling 2,600 feet in three leaps. Hundreds of people visit the valley every year and are impressed with the grandeur of its beautiful scenery.

LXXI.

The prairies of the Mississippi basin yield large quantities of grain. The hardy wheat is grown in the north and corn is harvested in abundance in the south. Much of the region is treeless, but not barren. The soil is compact and fertile. Fearful thunder storms sweep over the prairies, and destructive tornadoes damage the crops and villages. In springtime the rivers overflow their banks and leave a deposit of fine, rich soil.

LXXII.

The cotton plant requires the warm season and the plentiful rainfall of the south for its ripening. The seed is surrounded by a fuzzy substance known as the cotton fibre. A superior variety—the sea island cotton—was introduced into the United States from the Bahama Islands. Who invented the cotton gin? Can you tell about raw cotton and cotton-seed oil? The water-power of New England is especially adapted to the cloth-making industry.

LXXIII.

Shell fish are among the valuable food products of the United States. Thousands are given employment in the oyster fisheries of Chesapeake Bay. Oysters attach themselves to various substances,—stones, shells, or drooping branches of trees—hence the saying in Venezuela, "Oysters grow on trees."

LXXIV.

Let us write and think of the following: clam, lobster, mackerel, salmon, halibut, shad, cod, bluefish, herring, bass. Can you name lake fish?

The Appalachian Highlands is a coal yielding district. Have you heard the remarkable history of the coal-beds —the continued process of centuries? Successive layers of coal have been found buried deep in the earth. Large quantities of soft coal are changed by a certain process to coke. Charcoal is charred wood. It resembles true coal in color, but not in weight. It is lighter and more porous.

LXXV.

Gold and silver are called precious metals because of their scarcity. In ancient times grains and nuggets of gold were washed from the mountain-sides to the gravel-beds below. Troughs, cleats, grooves, quartz, and quick-silver are words that may be remembered in connection with gold mining. Silver is rarely found in a pure state, but is more often combined with other minerals.

LXXVI.

The lofty structure, the lighthouse, throws its friendly beams across the raging sea to warn the sailor of the sunken rocks and treacherous shoals. The ancient Eddy-stone lighthouse—a hoop and lighted candle. The mod-ern lighthouse—a strong electric light, condensed into beams more powerful than a million candles. Such is the progress of science. Enterprise goes hand in hand with knowledge.

LXXVII.

Among the principal iron regions the Lake Superior district ranks first. Its ore is transported by means of lake steamers. Iron is extracted from its ore by means of a process called smelting. Steel is refined iron used in manufacturing articles that must withstand great strain or pressure. We have steel knives, pens, rails and bicycle spokes; iron stoves, pipes, bars and hydrants.

LXXVIII.

The avenue seems alive with cable cars, carriages and pedestrians as we journey on toward *that imposing national structure, the Capitol.* Shall we visit the Senate Chamber and Hall of the House of Representatives? We enter the rotunda and are impressed with the wonderful fresco decorating the canopy over our heads? George Washington selected the site of the city of Washington. Maryland ceded the District of Columbia.

SCIENCE.

LXXIX.

It is hard to number the parts of the flower. The calyx is the outer covering: its separate leaves are called sepals. The corolla is usually made up of a number of petals. The parts of the stamens are the filament and anther. The parts of the pistil are the stigma, style and ovary. Can you tell the use of the pollen?

LXXX.

The native plants of certain countries often find distant homes. Seeds are transported in various ways. The

wind, the birds, and man have all aided in the transportation of plant life. Some seeds are provided with wings. The breezes carry them far above the tree-tops and lodge them among new surroundings. The geographical distribution of plants is governed by the climate and the distance above the sea-level.

LXXXI.

Have you studied the apple blossom and watched the growth of the ovary of the flower? How the wall thickens! It increases its dimensions until the poor little seed is lost in a sphere of ripening fruit. Count the seeds and the partitions. The seeds of many plants furnish food for both man and animals. Barley, wheat, oats, and rye are among the cereals cultivated in our own country.

LXXXII.

Air occupies space. Prove this statement. Invert this empty glass and plunge it slowly into a larger vessel nearly full of water. Observe the result. Incline the glass and see the bubbles escape. The escaping bubbles are air which was imprisoned under the glass, although, like the air around us, it is invisible.

LXXXIII.

Air exerts pressure. Apparatus necessary—a hollow glass tube closed at one end and a bowl containing water. Draw air from the tube and insert it in the bowl of water. We are convinced by this simple experiment that pressure of air is very perceptible. Air exerts pressure in all directions—upwards, downwards and sideways. Air weighs upon us as water weighs upon the fish.

LXXXIV.

Air is compressible and elastic. The first experiment illustrates the compressibility of air. Science has made use of the properties of air in the following inventions: compressed-air motors, pneumatic tires, air-cushions, air-brakes, air-pumps, water-pumps, diving-bells, barometers, balloons, parachutes and flying-machines.

LXXXV.

Water exerts pressure in all directions. A floating body displaces water equal to its own weight. Buoyant force of water is shown by the transportation of sticks, seeds, sand and pebbles by the rivers and ocean currents. Springs and artesian wells derive their supplies from higher altitudes. How often we use the lawn-sprinkler, admire the fountain, drink from the city water system and forget the simple law, "Water seeks its own level."

LXXXVI.

A liquid easily changes its position, but the molecules tend to cling together. Moisture attracts moisture. Water will flow more easily over a wet surface. Water shows a tendency to pass through the entire substance of a porous body. Illustrate with a sponge, or a piece of blotting paper. Why do we put stems of flowers in water and expect the blossoms to revive?

LXXXVII.

Solids, liquids and gases expand when heated, contract when cooled. Think of the expansion and contraction of iron rails, the popping of corn and the roasting of chest-

nuts. Iron, lead, gold, silver and other metals may be changed to liquids by the application of heat. When water becomes solid it expands. Why does a crack in a ledge grow wider and longer each year?

LXXXVIII.

The hot sunshine causes water to evaporate and fills the air with moisture. After sunset the grass becomes cool more quickly than the atmosphere. The moisture coming in contact with the cool ground collects in the form of dew. Have you seen dew on a pitcher of ice-water? Why is it there? A cloud of moisture strikes a current of cold air. It is condensed and rain falls. When a teapot of water is heated to the boiling point the confined steam exerts pressure. Watch the cover. It smiles, opens its mouth, and talks to you.

REVIEW LESSONS.

LXXXIX.	XC.	XCI.	XCII.
performing	health	press	inward
task	secret	strife	kingdom
diligent	happiness	unshared	vegetable
disturb	recess	unblest	obtain
faithfully	jump	hoard	products
tidy	shout	worthy	agriculture
handled	tired	commandments	interesting
torn	women	length	elements
slight	breath	mercy	nature
daily	figure	truth	mountain
yield	dial	forsake	valley
sorrow	throb	bind	angry
bravely	noblest	neck	drought.
to-morrow	accomplish	favor	balance
habit	depend	understanding	extremes
either	clothes	toward	harmony
speaking	rely	rather	reign
lazy	sailor	chosen	supreme
character	merchant	riches	important
bundle	provide	humility	diet
tissue	workers	honor	diary
weave	shun	boast	varies
destiny	amid	praise	quality
reap	scene	stranger	according
sown	generous	Bible	old-fashioned

XCIII.	XCIV.	XCV.	XCVI.
churn	surrounded	bottom	south
required	shell	islands	march
machine	wonderful	sand	due
minute	curled	desert	irregular
pound	breast	multiplied	shape
nourishment	dressed	visited	peninsula
ancient	between	beach	cape
cultivated	cast	sea-shore	projecting
grape	shadow	shallow	coast
dried	edge	reach	promontory
converted	circle	seaweed	joined
raisins	prove	creatures	narrow
variety	happen	abound	isthmus
currants	ocean	river	queer
cluster	surface	lake	meaning
weight	wholly	fresh	woolly
thirteen	partly	only	flat
ounces	separate	spawn	noses
September	continent	deposit	thick
lemons	borrow	dipper	tea
truly	shower	pointers	Negro
eight	passages	north	Chinese
planets	gulf	east	Turks
continually	sound	west	Arabs
whirling	strait	left	Lapps

XCVII.	XCVIII.	XCIX.	C.
Finns	absorb	twice	cloud
Esquimaux	perish	hydrogen	dew
reindeer	steadily	colorless	history
meat	toiled	odorless	explained
watch	brief	balloon	money
growth	being	burning	vessel
germinating	wither	match	twelfth
plantlet	fade	tube	October
cotyledons	composed	unite	received
fairy	oxygen	explosion	portion
sprinkle	nitrogen	occur	evidence
lowly	fifth	miners	aware
dropping	atmosphere	marble	inspired
moisture	level	lime	faith
plumule	dense	carbon	science
radicle	rare	dioxide	immortal
patter	motion	ooze	hail
knock	shaking	grotto	settlement
lore	mill	heavier	August
creeping	poison	circulate	colony
shoot	support	lungs	trade
fleshy	combustion	exhale	evil
radish	presence	unwise	enemies
beet	influence	frozen	fled
carrot	blaze	liquid	religion

CI.	CII.	CIII.	CIV.
granted	severe	sylvan	comfortable
request	escaped	apostle	arithmetic
amongst	perils	balm	instructing
language	pursuing	emblem	minister
beaver	desperate	re-echo	township
lodge	undertaking	fain	decision
swiftly	passage	appease	majority
rabbit	ice-clad	haunts	inhabitants
timid	weary	molested	tread
companies	scantily	hardships	fondest
travel	provisioned	hemp	sepulchre
explore	depending	raised	slave
voyage	charity	flax	unchained
selected	draught	spinning	newspaper
governed	board	knitting	document
several	hostile	ladder	protest
suffering	giant	garret	refused
beginning	tossed	realm	stamp
powerful	exiles	descend	repealed
December	moored	tempest	parliament
brook	brotherly	cease	aroused
stout	hundred	beneath	refrained
fence	rapidly	rifles	cargo
turkey	wharves	attacked	harbor
abundant	guarding	suddenly	lantern

CV.	CVI.	CVII.	CVIII.
flashed	embody	central	deposit
cliffs	indefinite	compare	cotton
scattering	denied	eagle	plentiful
swelled	blessing	privileged	rainfall
triumphant	barefoot	gorge	ripening
thunder	pantaloons	vertical	fuzzy
course	whistled	cascades	substance
necessary	strawberries	cataracts	fibre
dissolve	jaunty	plunge	superior
political	difficult	cañon	introduced
decent	imagine	leap	invented
respect	discriminative	grandeur	cotton-gin
opinion	attention	prairies	especially
fervor	engaged	quantities	adapted
preserve	efforts	harvested	industry
stretch	permanently	treeless	shell-fish
southmost	uniformly	barren	thousands
steadfast	gladness	region	employment
resource	talent	compact	oyster
loneliness	success	fertile	fisheries
journey	relief	sweep	attach
refuge	drainage	destructive	lobster
trouble	similar	tornadoes	clam
intellect	division	damage	mackerel
image	system	crops	salmon

CIX.	CX.	CXI.	CXII.
codfish	mineral	bicycle	style
shad	combined	spoke	wary
bluefish	structure	hydrants	pollen
herring	throws	avenue	breeze
bass	treacherous	cable-car	geographical
district	shoals	carriages	climate
remarkable	electric	pedestrian	distribution
continued	condensed	imposing	sea-level
process	modern	national	increase
centuries	million	capitol	dimension
successive	candle	senate	sphere
layers	enterprise	representatives	barley
coke	knowledge	fresco	partition
charcoal	principal	decorating	cereal
charred	iron	canopy	occupies
porous	transported	site	statement
resembles	steamers	calyx	invert
precious	extracted	sepals	empty
scarcity	smelting	corolla	observe
nuggets	steel	petals	incline
gravel	refined	stamens	bubbles
trough	manufacturing	filament	invisible
cleats	article	anther	apparatus
quicksilver	withstand	pistil	hollow
connection	pressure	stigma	bowl

CXIII.	CXIV.	CXV.	CXVI.
convinced	currents	contact	English
experiment	artesian	pitcher	French
perceptible	desire	strike	Spanish
directions	altitudes	condensed	Dutch
upward	sprinkler	confined	Quaker
downward	admire	steam	Pilgrim
sideways	fountain	Venezuela	Hudson
compressible	easily	Lake Superior	Mississippi
illustrates	molecules	Washington	St. Lawrence
compressibility	together	Naples	Orinoco
properties	tendency	Hamburg	Mackenzie
inventions	sponge	Saratoga	Appalachian
motor	blotting	Lexington	Yosemite
pneumatic	blossoms	Virginia	Chesapeake
tires	revive	Plymouth	Pacific
cushions	expand	Philadelphia	Atlantic
brakes	contract	Greenland	Columbus
pumps	expansion	Iceland	Raleigh
diving	popping	Finland	Elizabeth
barometers	roasting	Nova Scotia	Patrick Henry
parachutes	chestnuts	St. Augustine	Francis Drake
floating	metals	California	Delaware
displace	application	Massachusetts	Jamestown
buoyant	ledge	Maryland	Paul Revere
transportation	atmosphere	Spain	James Otis

SELECTED WORDS.

To be written in sentences by the pupil.

daily	tale	chisel	cuffs
brain	berry	grater	broom
waist	grown	until	bedstead
ankle	quick	busily	spool
lovely	relative	strainer	lounge
toes	war	stain	linen
knees	shout	colander	serve
elbow	sneeze	hymn	cloak
thumb	latch	cistern	bonnet
throat	float	drown	buttons
eyebrow	bubble	weave	fringe
palm	furnace	quilt	parasol
bait	cent	screen	necktie
beggar	shovel	needle	flannel
stroke	shavings	berth	woolen
model	hydrant	limit	single
wife	sieve	thimble	tacks
family	toaster	blanket	peel
muse	boiler	fowl	jacket
noise	barrel	vases	leggings
fasten	wire	hassock	layer
orphan	oven	earn	errand
scale	plane	tumbler	muff
leak	hammer	doily	boil
wedding	saucepan	mattress	parsnips

SELECTED WORDS.

To be written in sentences by the pupil.

beets	parcel	pastor	cable
salad	traveler	organist	harbor
cloves	cloudy	soprano	pump
quinces	bundle	tenor	firkin
caraway	anvil	bass	cellar
puzzle	advice	alto	ashes
wring	altar	shield	cinder
gallop	bruise	dagger	cracker
apricots	mallet	prayer	poker
guide	gimlet	steward	fellow
citron	glance	steerage	pullet
ginger	pincers	cabin	putty
lane	square	bullet	elbow
lemonade	donkeys	pattern	shoulder
doughnuts	puppies	pilot	apron
venison	kittens	helm	chisel
sardine	hoof	surface	saw
truant	screw-driver	rudder	vise
promote	wrinkle	captain	bench
district	thrush	bugle	forge
veins	panther	consent	anvil
halter	leopard	chapel	steady
murmur	giraffe	suggest	willing
package	wreath	shoeing	civil
chilly	vestry	beaver	simple

PART III.

I.

The excellent commercial advantages of Greece are due to the irregularity of her coast line. Greece's ancient orators and philosophers were unrivaled. Her architecture has been studied for centuries. By excavations made in various portions of the country, much has been learned of her ancient cities, temples and statues. The Greek education consisted chiefly in the study of music and physical training.

II.

The isles of Greece! The isles of Greece!
Where burning Sappho loved and sung,—
Where grew the arts of war and peace,—
Where Delos rose and Phœbus sprung!
Eternal summer gilds them yet,
But all except the sun is set.

—*Lord Byron.*

III.

Land of bards and heroes, hail!
Land of gods and god-like men.
Thine were hearts that could not quail,
Earth was glorious then;
Thine were souls that dared be free;
Power, and fame, and liberty.

—*J. G. Percival.*

IV.

Italy is often called the treasure house of Europe. Under the fair Italian skies can be found famous monuments of antiquity. The Colosseum, the Forum and the Pantheon are relics of an ancient city that stood on its seven hills. Rome is situated in a plain through which flows the sluggish, muddy Tiber. St. Peter's at Rome is the largest cathedral in the world. The Vatican is the home of the Pope. An interesting story is told in connection with the erection of the obelisk.

V.

The Roman Empire attained its greatest splendor under the Emperor Augustus. The Empire was bounded by the Euphrates on the east, the Danube and the Rhine on the north, the Atlantic Ocean on the west, and the deserts of Africa on the south. It comprised one hundred different nations, each speaking its own language and worshiping its own gods. It was an age of general peace and prosperity. During this period Jesus Christ was born.

VI.

True greatness, first of all, is a thing of the heart. It is all alive with robust and generous sympathies. It is neither behind its age, nor too far before it. It is up with its age, and ahead of it only just so far as to be able to lead its march. It cannot slumber, for activity is a necessity of its existence. It is no reservoir, but a human fountain.—*Hitchcock.*

VII.

England, Scotland and Wales are included in Great Britain. Ireland, and many of the oceanic islands, are governed by her laws. England has established her colonies in America, Europe, Asia, Africa and Australia. The sun never sets upon the entire English dominion. Sir Walter Scott has written much about the wild and romantic scenery of Scotland. His home, Abbotsford, is near the ruins of Melrose Abbey. Great Britain maintains the largest navy in the world.

VIII.

The early inhabitants of Britain lived in caves. Their tools, made of stone and bronze, are found in mounds with their bones. They were a tall and well-formed race. The Britons were brave and fought chiefly from chariots drawn by horses. Fifty-five years before the birth of Christ, Julius Cæsar visited Britain. A century later the Romans conquered the country. There are to be seen in England many traces of the Romans, in the form of ruined walls, fragments of tiled floors, and roads built of stone.

IX.

About four hundred years after the Roman invasion several Teutonic tribes of Northern Europe entered Britain. A little later came the Saxons. It is supposed that the early Britons were nearly all destroyed. The English language contains many Latin words, but is largely derived from the speech of the Teutonic tribes. During this early period there were many wars in England. When the Danes invaded England in the ninth century, they had to contend with brave warriors.

X.

In the year 1066, Duke William of Normandy brought an army across the English channel to attack England. He was victorious in a battle fought near Hastings. In five years he had completed the conquest. Under King William, England, for the first time, became a united nation. During his reign great cathedral churches were planned and built. His son, William, built the old Westminster Hall in London.

XI.

Hugged in the clinging billow's clasp,
From seaweed fringe to mountain heather,
The British oak with rooted grasp
Her slender handful holds together ;—
With cliffs of white and bowers of green,
And ocean narrowing to caress her,
And hills and threaded streams between,—
Our little mother isle, God bless her!

—*Holmes.*

XII.

Queen Victoria came to the throne in 1837. During her reign the English nation has made rapid progress in wealth and influence. Many reforms have been instituted and the rights and privileges of the common people have been greatly extended. The House of Commons no longer represents the owners of land and the rich alone, but the entire people of the kingdom. The Hon. William E. Gladstone was for many years a leader of the liberal movement.

XIII.

England is a domestic country. Here the home is revered and the hearth sacred. The nation is represented by a family—the Royal family—and if that family is educated with a sense of responsibility and a sentiment of public duty, it is difficult to exaggerate the salutary influence it may exercise over a nation.—*Disraeli.*

XIV.

The English, from the great prevalence of moral habits throughout every class of society, have always been fond of those festivals and holidays which agreeably interrupt the stillness of country life; and they were in former days particularly observant of the religious and social rites of Christmas. It is inspiring to read even the dry details which some antiquarians have given to the quaint humors, the burlesque pageants, the complete abandonment to mirth and good-fellowship, with which this festival was celebrated. It seemed to throw open every door and unlock every heart.—*Washington Irving.*

XV.

She, beloved for a kindliness
Rare in Fable or History,
Queen, and Empress of India,
Crown'd so long with a diadem,
Never worn by a worthier,
Now with prosperous auguries
Comes at last to the bounteous
Crowning year of her Jubilee.

Queen true to womanhood as Queenhood,
Glorying in the glories of her people,
Sorrowing with sorrows of the lowest.

—*Tennyson.*

XVI.

France is a republic. The majority of the inhabitants are Roman Catholics. The latitude of France corresponds to New England, but the climate is milder. Warm winds from the Mediterranean and the Atlantic modify the temperature. An endless variety of articles is manufactured in the leading towns and cities of France. Bayonets were so called from the city of Bayonne, where they were first manufactured.

XVII.

In France are many old and interesting cities. In Rouen one can see the old tower in which Joan of Arc was once a prisoner. Here, also, is an old church that existed in the time of William the Conqueror. Paris, situated on the river Seine, is noted for its art galleries and broad avenues. In the old churches and palaces are to be seen many monuments of the old French monarchy.

XVIII.

Of all the great names of France, that of Napoleon Bonaparte is most noted. His ability as a general was only excelled by his ambition. He vanquished the armies of continental Europe. He inspired fear in the minds of sovereigns. The worst defeat he suffered was on the storm-swept plains of Russia. Here his army was destroyed. At Waterloo he was only defeated.

XIX.

Finally, in place of those innumerable warriors, of their four hundred thousand comrades, who had been so often their partners in victory, and who had dashed onward with so much pride and joy into the territory of Russia, they now saw issuing from these pale and frozen deserts only a thousand infantry and horsemen still under arms, nine cannon, and twenty thousand miserable wretches, covered with rags, with downcast looks, hollow eyes, cadaverous and livid complexions, and long beards matted with frost. —*Sigur.*

XX.

There was a sound of revelry by night,
And Belgium's capital had gathered then
Her beauty and her chivalry, and bright
The lamps shone o'er fair women and brave men;
A thousand hearts beat happily; and when
Music arose with its voluptuous swell,
Soft eyes looked love to eyes which spake again,
And all went merry as a marriage bell.
But hush! hark! a deep sound strikes like a rising knell!

—*Byron.*

XXI.

The German Empire is about the size of Texas. Eight millions of the inhabitants are engaged in tilling the soil. They are intelligent, ingenious and thrifty. Every German youth is compelled by law to serve in the army from one to three years. The vineyards of the Rhine are famous. Germany surpasses all other countries in the manufacture of steel. Hundreds of public buildings and

palaces are grouped around the numerous squares of Berlin. Scientific schools, libraries and museums of art make Berlin one of the chief centres of learning.

XXII.

In 1870, at the battle of Sedan, King William I of Germany defeated Napoleon III and captured his army. Paris soon surrendered and the German army entered the city. It was soon after this event that the states of Germany were united in the German Empire. Prince Bismarck was influential in bringing about this result. The Emperor Frederick, who lived to reign only a few weeks, was greatly beloved throughout the Fatherland. The banks of the river Rhine are lined with vineyards and the ruins of ancient castles.

XXIII.

The castled crag of Drachenfels
  Frowns o'er the wide and winding Rhine,
Whose breast of waters broadly swells
  Between the banks which bear the vine;
And hills all rich with blossomed trees,
  And fields which promise corn and wine,
And scattered cities crowning these,
  Whose far white walls along them shine,
Have strewed a scene, which I should see
  With double joy wert thou with me.

—*Byron.*

XXIV.

Russia in Europe and Russia in Asia cover a vast territory. Central Russia yields abundant supplies of timber. South of the forests is a succession of vast plains called

steppes. Most of the inland trade is carried on by means of an annual fair at Lower Novgorod, where millions of dollars are exchanged yearly. St. Petersburg, Moscow, Warsaw and Odessa are important centres of trade. Stories of the Siberian exiles have been published in *The Century.*

XXV.

The Russian Empire, when compared with the other great nations of Europe, seems to be far behind in those elements which constitute civilization. Its constitution places little restraint upon the absolute will of the Czar. The people have no voice in legislation. This occasions much dissatisfaction, and men are continually plotting against the existing order. Those suspected of political crimes are punished with the greatest severity.

XXVI.

All eyes are fixed upon the Russian bear, cautiously and steadily prowling toward the south and east. Austria hungrily watches the Balkan provinces, over which the paw of the bear already hovers. Italy, with hate and suspicion, has eyes riveted upon her hereditary enemy, Austria. France, never for a moment forgetting Alsace and Lorraine, watches her opportunity with Germany, and draws into closer affinity with Russia.—*Mary Parmele.*

XXVII.

I have no idea of a liberty unconnected with honesty and justice. Nor do I believe that any good constitutions of government or of freedom can find it necessary for their

security to doom any part of the people to a permanent slavery. Such a constitution of freedom, if such can be, is in effect no more than another name for tyranny of the strongest faction.—*Burke.*

XXVIII.

Asia is the largest and most densely populated continent; the land of the highest mountains and the broadest plateaus; and the home of the oldest and most peculiar nations. Historical traditions point to Asia as the birthplace of man. The fiercest animals and the most precious minerals are found in Asia. Asia possesses a variety of climate. Siberia is the coldest, Arabia the hottest, and India the most humid country in the world.

O'er Arabia's desert sands
The patient camel walks,
Mid lonely caves and rocky lands
The fell hyena stalks.

—*Aikin.*

XXIX.

The Scripture mentions the Garden of Eden as situated in the valleys of the Euphrates and Tigris rivers. Palestine reminds us of the stories of the life and death of Jesus of Nazareth. Centered within and around Asia Minor are numerous sites where figured many incidents in the early history of mankind. The Arabian Desert is the scene of the wanderings of the Israelites under their leader, who was forbidden entrance to the land of Canaan.

XXX.

By Nebo's lonely mountain,
On this side Jordan's wave,
In the vale in the land of Moab
There lies a lonely grave.
And no man knows that sepulchre
And no man saw it e'er,
For the angels of God upturned the sod
And laid the dead man there.

XXXI.

That was the grandest funeral
That ever passed on earth;
But no man heard the trampling,
Or saw the train go forth.
So without sound of music,
Or voice of them that wept,
Silently down from the mountain's crown
The great procession swept.

—*Cecil Frances Alexander.*

XXXII.

Africa is distinguished by its deserts, magnificent rivers, luxuriant vegetation, gigantic animals, and barbarous races. Fierce simoons sweep over the Sahara Desert. Men and animals lie with faces to the ground to avoid suffocation. Camels, freighted with merchandise, journey across the desert. Much of the continent of Africa is unexplored.

Regions immense, unsearchable, unknown;
Bask in the splendor of the solar zone,—
A world of wonders, where creation seems
No more the work of Nature, but her dreams.

—*James Montgomery.*

XXXIII.

Hail Egypt! land of ancient pomp and pride,
Where Beauty walks by hoary Ruin's side;
Where plenty reigns, and still the seasons smile,
And rolls—rich gift of God!—exhaustless Nile.

—*Nicholas Michell.*

Egypt is traversed by the Nile River. Clouds are seldom seen in the lower valley. Among the mountains of Abyssinia the rain comes down in torrents, causing the overflow of the Nile. When the water subsides, a rich sediment covers the soil.

XXXIV.

Mysterious flood—that through the silent sands
Hast wandered century on century,
Watering the length of green Egyptian lands,
Which were not but for thee.

Thou givest blessings as a god might give,
Whose being is his bounty: from the slime
Shaken from off thy skirts the nations live,
Through all the years of Time.

—*Bayard Taylor.*

XXXV.

The ancient Egyptians were highly civilized people. Paintings remain as bright to-day as when executed by the artists. Mummified bodies are found in the catacombs. The sphinx and pyramids are among the world's wonders.

Still through Egypt's desert places
Flows the lordly Nile,
From its banks the great stone faces
Gaze with patient smile;

Still the Pyramids imperious
Pierce the cloudless skies,
And the Sphinx stares with mysterious,
Solemn, stony eyes.

—*Longfellow.*

XXXVI.

Australia is encircled by mountains of moderate elevation. The interior is diversified with sand wastes, steppe lakes, and salt marshes. A most peculiar animal is the kangaroo. The female carries her young in a kind of pocket called a pouch. There are few pouched animals in existence. In some regions of Australia the climate is delightful.

There is a land where summer skies
Are gleaming with a thousand dyes,
Blending in witching harmonies;
And grassy knoll and forest height
Are flushing in the rosy light,
And all above is azure bright—
Australia!

XXXVII.

The earth is a sphere, 8,000 miles in diameter, and 25,000 miles in circumference. The sun, moon and stars apparently move from east to west. In reality the earth is constantly rotating on its axis from west to east. The earth's orbit is technically called an ellipse. Accurately computed, the earth completes its annual revolution round the sun in 365 days, 5 hours, 48 minutes, and 50 seconds.

XXXVIII.

The Arctic Circle, Tropic of Cancer, Tropic of Capricorn and Antarctic Circle are parallel to the Equator. Can we comprehend the extent and vastness of a boundless expanse enclosed by imaginary circles thousands of miles in circumference?

> While fancy, like the fingers of a clock,
> Runs the great circuit and is still at home.
>
> —*Cowper.*

XXXIX.

The zones are, North Frigid Zone, North Temperate Zone, Torrid Zone, South Temperate Zone and South Frigid Zone. Small circles divide the earth into five zones, and meridian circles mark the latitude and longitude of cities inhabited by millions of people.

> Sail on, ye stately ships,
> And with your floating bridge, the ocean span;
> Be yours to bring man nearer unto man!
>
> —*Longfellow.*

XL.

The organs of circulation are the heart and blood-vessels. The blood-vessels are distinguished as arteries, capillaries and veins. The heart may be called a hollow muscle of four cavities, two auricles and two ventricles. The cavities contain arterial and venous blood. Arteries carry blood from, and veins return blood to, the heart. Capillaries form a medium of communication between veins and arteries. The heart contracts with regularity,

expelling the blood it contains with such force as to produce the shocks easily felt in the arteries near the skin—at the temples and wrists. Physicians feel the pulse to ascertain the action of the heart.

XLI.

The heart—first to live and last to die—is never idle. It is a faithful, diligent servant. The blood, once forced into the aorta, is not permitted to return before accomplishing the duties assigned. Valves may furnish resting-places, the blood's motion must be onward to the journey's end. With work half completed it returns to the heart laden with impurities, only to be pumped away to the lungs, where it exchanges the poisonous gases and returns charged with oxygen, a sustainer of life.

XLII.

The tongue and teeth aid the process of mastication. The active tongue constantly brings food under the teeth to be cut and masticated, then rolls it into position to be swallowed. The food then descends the œsophagus to the stomach, a pouch capable of holding between two and three pints. From the stomach food passes through the small and large intestines by means of the contraction of muscular fibres, which force the food in its passage along this tube-like coil.

XLIII.

As the food makes its way through the alimentary canal, certain liquids or juices are furnished by various glands, which dissolve and transform useful portions into

new substances. Saliva, a juice secreted from the salivary glands, converts starch into sugar. Gastric juice oozes from minute glands of the stomach and dissolves in general all animal matter except fat. Secretions from glands of the small intestine and pancreas perform work neglected by the saliva and gastric juice. The liver pours into the small intestine a greenish-yellow bile. The gland also effects important changes in the blood itself.

XLIV.

Quartz is the most common crystal. It can be broken into fragments having a glassy lustre. It strikes fire with steel. On account of its hardness, which resists the action of the elements, it makes up a large part of ordinary cobblestones, pebbles, gravel, sand and even the soil. Some crystals are transparent, others semi-transparent, and still others are opaque. Quartz is often found in uncrystallized form—as flint, agate and chalcedony. The amethyst, jasper and opal are varieties of quartz.

XLV.

By experiment and study, coarse granite is found to contain quartz, felspar and mica. The latter can be readily recognized by its glistening appearance. Granite is an excellent building stone, but its granular texture unfits it for road-making. Granite obelisks in Egypt have stood 3,000 years. Pompey's Pillar and the principal pyramids are composed of granite, yet during the Crimean war it was shown that granite ramparts were as easily demolished as those of limestone.

XLVI.

The numerous rays projecting from the coral polyp are called tentacles. The skeleton is limestone, separated by the tiny laborer from the sea-water continually supplied by the movements of the tentacles. The life of an individual is brief, but a colony endures for ages. One vast host deposits its layer of limestone and passes away. Another and another succeeds, and thus high columns rise through the waves to become the support of coral islands.

"So the little coral workers,
By their slow and constant motion,
Have made those pretty islands
In the distant, dark-blue ocean."

XLVII.

The coral groves of the ocean floor are decorated like the gardens of the land, the flower-like polyps answering to our pinks, daisies, violets and lilies. They strew the bottom, which is of the whitest and purest sand; or hang like leaves and flowers, or cling like mosses and lichens to the branching coral, and lend rare enchantment to the scene. Fishes of many colors, with exquisite grace of movement, dart among the branches.—*Maury.*

XLVIII.

The water is calm and still below,
For the waves and winds are absent there;
And the sands are as bright as the stars that glow
In the motionless fields of upper air.
There, with a light and easy motion,
The fan coral sweeps through the clear, deep sea;

And the yellow and scarlet tufts of ocean
Are bending like corn on the upland lea.
And life in rare and beautiful forms
Is sporting amid those bowers of stone,
And is safe where the wrathful spirit of storms
Has made the top of the wave his own.

—*James Gates Percival.*

XLIX.

Heat is transmitted more readily by certain bodies than by others. Wool and feathers have been provided by nature as the clothing of animals. The heat of an animal is generally greater than that of the surrounding substances, and this heat is not readily conducted through garments of wool, feathers or fur. Water and air are poor conductors of heat. Air is slowly heated, and when once heated, is as slowly cooled. Heat is generally transmitted through liquids and gases by the motion of their molecules.

L.

Certain bodies radiate heat more readily than others; some retain heat, therefore cool slowly. Corrugated stoves, radiators, screens and hot-houses may be mentioned in connection with this principle. The earth receives heat through radiation, and clouds prevent this heat from escaping into space. Clear nights are cold. On cloudy nights less dew appears. Dew and frost are deposited more copiously on some objects than others. This is due to differences in temperature caused by radiation. Cold objects condense and chill the moisture that floats about them.

LI.

Heated air expands; therefore equal volumes of hot and cold air differ in weight. Man's applications—furnace heating and systems of ventilation. Nature's illustration—winds. A volume of hot water is lighter than an equal volume of cold water. Man's application—hot-water system of heating. Nature's illustration—ocean currents. When the surface of a lake becomes cool, condensed particles continually sink and are replaced by warmer particles. After the lake reaches a temperature of 4° above freezing-point, the water, contrary to its usual practice, expands when further cooled. Ice, being decidedly light, floats on the surface.

LII.

The United States is distinguished as being the foremost republic and the most prosperous nation in the world. Its area is about three and a half millions square miles. Its population is representative of all the nations of Europe. To this vast tide of immigration the rapid growth of our country is largely due. It is remarkable how soon foreigners, who come under the influence of our institutions, become Americanized.

LIII.

The President is elected to serve four years. He is commander-in-chief of the army and navy. He has a cabinet of advisers consisting of eight men. These officers administer respectively: the departments of foreign affairs, the treasury, the army, the navy, home affairs, justice, the post-office, and agriculture. The Vice-president presides

over the Senate. The Supreme Court consists of a chief-justice and eight associate justices, appointed by the President.

LIV.

Legislation, or law-making, for the United States is committed to a body called the Congress. It consists of the Senate and the House of Representatives. The Representatives are elected by the people according to the number of people in each state. They serve for a term of two years. Senators, two from each state, are chosen by the legislatures of the several states and serve for a term of six years.

LV.

The pages of history teem with accounts of popular tumults, wherein passion breaks loose and wreaks its fell purpose, misguided and restrained by reason. No definition could be further from describing the colossal event which occurred in Boston on the 16th of December, 1773. Here passion was guided and curbed by sound reason at every step, down to the last moment in the dim candle-light of the old church, when the noble Puritan statesman quietly told his hearers that the moment for using force had at last, and through no fault of theirs, arrived.—*John Fisk.*

LVI.

The causes of the Revolution, so fertile a theme of speculation, are less definite than have been imagined. The whole series of colonial events was a continued and accumulating cause. The spirit was kindled in England;

it went with Robinson's congregation to Holland; it landed with them at Plymouth; it was the basis of the first constitution of these sage and self-taught legislators; it never left them nor their descendants. It extended to the other colonies, where it met with a kindred impulse, was nourished in every breath, and became rooted in the feelings of the whole people.—*Jared Sparks.*

LVII.

George Washington was rather above the common size; his frame was robust and his constitution vigorous, capable of enduring great fatigue, and requiring a considerable degree of exercise for the preservation of his health. His exterior created in the beholder the idea of strength, united with manly gracefulness. His person and whole deportment exhibited an unaffected and indescribable dignity, unmingled with haughtiness, of which all who approached him were sensible; and the attachment of those who possessed his friendship and enjoyed his intimacy, was ardent, but always respectful.—*John Marshall.*

LVIII.

Happy in the confirmation of our independence and sovereignty, and pleased with the opportunity afforded the United States of becoming a respectable nation, I resign with satisfaction the appointment I accepted with diffidence, a diffidence in my abilities to accomplish so arduous a task, which, however, was superseded by a confidence in the rectitude of our cause, the support of the supreme power of the Union and the patronage of Heaven. —*George Washington.*

LIX.

To Thee, beneath whose eye
Each circling century
Obedient rolls,
Our nation in its prime
Looked with a faith sublime,
And trusted in the time
That tried men's souls.

There, like an angel form
Sent down to still the storm,
Stood Washington!
Clouds broke and rolled away;
Foes fled in wild dismay,
Wreathed were his brows with bay,
When war was done.

—*John Pierpont.*

LX.

No man has come to true greatness who has not felt in some degree that his life belongs to his race, and that what God gives him he gives him for mankind.—*Phillips Brooks.*

Greatness is a spiritual condition worthy to excite love, interest and admiration; and the outward proof of possessing greatness is that we excite love, interest and admiration.—*Matthew Arnold.*

LXI.

The name of Benjamin Franklin will ever be a precious memory in the hearts of American patriots. He was born in Boston in 1706, and died in 1790. The poverty of his parents forbade his enjoying the advantages of education. By exercising great frugality he managed to

buy a few books which he studied diligently. Being induced by false representations to go to England, he found himself almost penniless in a strange land. By the display of singular industry he soon made friends and a successful living.

LXII.

Franklin made a brilliant business career in Philadelphia. His leisure hours were devoted to science. His discoveries in electricity are world-renowned. He was an unflinching patriot. He helped to draught the Declaration of Independence and was one of its signers. As Ambassador to the court of France, he was revered for his wit, his genius, his dignity, and his charming conversation.

LXIII.

Dost thou love life? Then do not squander time, for that is the stuff life is made of.

Diligence is the mother of good luck, and God gives all things to industry; then plow deep while sluggards sleep, and you shall have corn to sell and to keep.

Little strokes fell great oaks. A little neglect may breed mischief; for want of a nail the shoe was lost; for want of a shoe the horse was lost; and for want of a horse the rider was lost.

He that goes a borrowing goes a sorrowing.—*Benjamin Franklin.*

LXIV.

Our constitution is in actual operation; everything appears to promise that it will last; but in this world nothing is certain but death and taxes.

Laziness travels so slowly that Poverty soon overtakes him.

We must all hang together or, assuredly, we shall all hang separately.

Pride that dines on vanity sups on contempt. Pride breakfasted with Plenty, dined with Poverty, and supped with Infamy.—*Franklin.*

LXV.

New England and village life in the 18th century presented a strange contrast to that with which we are familiar. The house of the settler was built of logs, the chinks daubed with clay, and the roof thatched with long grass. In the later and better class of dwellings, the logs were hewn square, so as to need no chinking; or a frame was made of heavy oak timbers, some of them eighteen inches in diameter, and all mortised and braced together in a manner that would be bewildering enough to a carpenter of to-day.

LXVI.

The sides were covered with split-oak clapboards, and the roof with split-cedar shingles, fastened by large, wrought-iron nails. The windows consisted of two small lead frames set with a few tiny diamond-shaped panes of glass, and hinged so as to open outward against the house. The doors were of oak plank, doubled and nailed together. They were often hung on wooden hinges and were securely fastened at night by heavy wooden cross bars. In the center of the house rose a stone or brick chimney, about twelve feet square at the base, affording a fireplace large enough for seats to be placed at the side, where the children could sit in the winter evening and look up at the stars.—*Barnes' History.*

LXVII.

On July 4th, 1776, John Hancock, president of Congress, signed the Declaration of Independence. There was great rejoicing throughout the thirteen colonies. On Christmas night of the same year, Washington surprised a body of Hessian soldiers at Trenton and captured a thousand prisoners and a large quantity of arms and ammunition. On January 3, 1777, General Washington fiercely attacked Lord Cornwallis at Princeton and gained a decisive victory. General Burgoyne surrendered at Saratoga, October 17, 1777.

LXVIII.

The winter of 1777 and '78 found the American army at Valley Forge in great distress. The apparently wretched condition of the American cause was relieved in the spring by the news that France had acknowledged the independence of the United States, and that a fleet was on its way to render assistance. At the battle of Monmouth, the brilliant courage of Washington rescued the army from disgrace. It was here that the commander-in-chief indignantly rebuked Lee, whose cowardice and disloyalty at length found their appropriate reward.

LXIX.

The most startling, and one of the saddest events of the Revolution was the treason of Arnold and the untimely death of General André. Arnold, having been reprimanded for unworthy conduct, resolved to gratify his desire for revenge and his avarice by turning traitor and delivering West Point into the hands of the British. The gloom which followed this act of treason was soon suc-

ceeded by victories in the South, which gave courage to the American army. The decisive victory at Yorktown practically ended the war.

LXX.

The Americans were drawn up in a line on the right side of the road, and the French occupied the left. At the head of the former, the great American commander, mounted on his noble courser, took his station. At the head of the latter was posted the excellent Count Rochambeau. The French troops, in complete uniform, displayed a martial and noble appearance. The Americans, though not all in uniform, nor their dress so neat, yet exhibited an erect, soldierly air, and every countenance beamed with satisfaction and joy.

LXXI.

When Lafayette was about to return to his native land at the close of the war, he said, in reply to a committee of the American Congress, appointed to present him with a letter addressed to the king, expressive of their high appreciation of the services he had rendered: "May this immense Temple of Freedom ever stand, a lesson to oppressors, an example to the oppressed, a sanctuary for the rights of mankind! And may these happy United States attain that complete splendor and prosperity which will illustrate the blessings of their government, and for ages to come rejoice the departed souls of the founders."—*Levi P. Morton.*

LXXII.

The American Revolution had its origin neither in ambition, nor avarice, nor envy, nor any gross passion; but

in the nature and relation of things, and in the thence-resulting necessity of separation from the parent State. Its progress was limited by that necessity. Our fathers displayed great strength and moderation of purpose. In difficult times they conducted with wisdom; in doubtful times, with firmness; in perilous times, with courage; under oppressive trials, erect; amidst temptations, unseduced; in the dark hour of danger, fearless; in the bright hour of prosperity, faithful.—*Josiah Quincy.*

LXXIII.

Great were the hearts, and strong the minds
  Of those who framed, in high debate,
The immortal league of love, that binds
  Our fair, broad Empire, state with state.

And deep the gladness of the hour,
  When, as the auspicious task was done,
In solemn trust, the sword of power,
  Was given to glory's unspoiled son.

—*W. C. Bryant.*

LXXIV.

The application of steam to carriages was first suggested by Robinson in 1759. Watt patented a locomotive engine in 1794. Stevenson, in 1825, brought a locomotive to such perfection that it attained a speed of twenty-nine miles an hour. The pressure at which steam is used in a locomotive is considerable, but an explosion is a rare occurrence. Several American mechanics have invented locomotive engines for propelling carriages on common roads. Steam engines are now used in various processes of agriculture.

LXXV.

The development of the railroad has tended to revolutionize industry and commerce. The highest engineering skill has applied itself to overcoming difficulties of construction. The cost of making railroads varies according to the number and extent of the tunnels, cuttings and embankments required. In America the railway carriage has reached its highest perfection. The parlor car is equipped with many of those comforts and conveniences found in a luxurious hotel. Is it not possible that Asia and Africa, as well as America and Europe, may one day be covered with a net-work of railroads?

LXXVI.

The postal service of the United States has enjoyed a remarkable growth and prosperity. It is bewildering to think of the magnitude of the service and the intricacy of the system whereby mails are promptly transported and distributed in the thousands of post-offices in the country. Postal clerks become accustomed to handling mail matter with great rapidity and correctness. In spite of defective and illegible addresses, the ratio of errors made is about one to every four thousand pieces handled.

LXXVII.

The Museum of the Dead Letter Office always interests visitors. It is an extraordinary collection of articles which people have tried to send through the mails. Among other curiosities are a hitching post, a loaded revolver, and an Indian scalp. Snakes and small alligators have been

found in the mails. There are boxes of cartridges, percussion caps, fire-crackers, torpedoes, false teeth, kitchen utensils, banjos and gold-headed canes.

LXXVIII.

The genius of man has gradually substituted machinery for manual labor. The forces of nature have been subjugated and made to serve the convenience of mankind. Doubtless there are many undiscovered applications of these forces that will, in future years, contribute to our comfort and happiness. Electricity has done much to annihilate time and space. Manifold discoveries in chemistry have powerfully affected the industrial arts.

LXXIX.

In employing all the muscular power at our disposal we are to make the employments we choose as educational as possible. For a wholesome human employment is the first and best method of education, mental as well as bodily. A man taught to plough, row, or steer well, and a woman taught to cook properly, and make a dress neatly, are already educated in many essential moral habits.—*Ruskin.*

LXXX.

Wealth begins in a tight roof that keeps out the rain and the wind; in a good pump that yields you plenty of sweet water; in two suits of clothes, so as to change your dress when you are wet; in dry sticks to burn; in a good double-wick lamp, and three meals; in a horse and locomotive to cross the land; in books to read; and so in giving on all sides, by tools and auxiliaries, the greatest

possible extension to our powers, as if it yielded feet and eyes and blood, length to the day, and knowledge and good-will.—*Emerson.*

LXXXI.

The restless sea is ever troubled by the ceaseless motion of its waters. The waves, the tides, the currents continually disturb it. A movement, like a great pulse, keeps the surface constantly rising and falling. Tides are caused by the attraction of the moon and sun, and occur alternately every six hours. When forced up narrow, shelving bays, deep gulfs, or broad river mouths, where their progress is often retarded, the tidal-wave ascends the channel as a perpendicular wall, attaining an enormous height.

LXXXII.

Ocean currents resemble rivers of such magnitude that the mightiest stream of the land is tiny compared to them. A constant interchange of waters between the polar and equatorial regions is affected by the differences of temperature. Cold, ice-bearing currents from the Arctic Ocean give the coast of Maine its singularly cool summers. The Gulf Stream is termed the "heat-carrier." Such immense volumes of heat are conveyed by this benignant stream to northern latitudes, that the winter climate of the whole western face of Europe, as far north as Lapland, is softened and tempered with genial warmth.—*Maury.*

LXXXIII.

Volcanic mountains are generally conical in shape. Materials ejected from a hole in the earth's crust form a circular mound. Successive eruptions occur, and the

mound becomes loftier with each eruption. The vent remains low while the matter ejected is built up about it. Thus the crater assumes a basin-like shape. In the eruption of Vesuvius, A.D. 79, the matter emitted exceeded the entire bulk of the mountain. There is no definite order in which the phenomena of an eruption succeed one another, but they are usually preceded by subterranean rumblings and tremors.

LXXXIV.

After the preliminary rumblings, dense columns and globular masses of watery vapor, mingled with a variety of gaseous substances, issue from the crater. "The spectacle is indescribably expressive at night. The emission of lava in the molten state is the most imposing of volcanic phenomena. After the flow of lava, the explosions become less and less frequent, and at last no evidence of volcanic activity remains, save, perhaps, a vapor-cloud veiling the summit of the mountain."—*Maury.*

LXXXV.

Winds are masses of air in motion. Like ocean currents, they are caused by differences of temperature. Winds may be classified as constant, variable and periodical. The constancy in the direction of certain winds has greatly aided commerce, hence the name "trade-wind." In the zones of the variable winds the polar and equatorial currents are continually striving for mastery. Monsoons are periodical winds, or land and sea breezes on a huge scale. They alternate with summer and winter, not with day and night.

LXXXVI.

My heart is awed within me when I think
Of the great miracles which still go on
In silence around me—the perpetual work
Of thy creation, finished, yet renewed
Forever. —*Byrant.*

Matter may undergo physical changes and recover its original form. If heated, it may cool; if melted, it may become solid again; if dissolved, it will reappear when the liquid evaporates. Chemical action may totally change substances and give rise to elements, or compounds, in which the original forms can never be directly recognized.

LXXXVII

The smallest particle of matter that can exist independently of other particles is called a molecule.

The particles which compose a molecule are called atoms.

A change in a substance which does not break the molecule is a physical change, and a change in which the molecule is dissolved into its atoms and new molecules formed is a chemical change.—*Edward R. Shaw.*

LXXXVIII.

Ammonia exists in minute quantity in the atmosphere. It is given off by putrefying animal and vegetable substances containing nitrogen. The distillation of bone and animal refuse, for the purpose of making bone-black, yields a large amount of ammoniacal liquor. The destructive distillation of coal in gasworks furnishes the great bulk of ammonium compounds. The solution of

ammonia-gas in water is a reagent continually required as a test in the laboratory and much used in the arts.

LXXXIX.

Chlorine is an element widely distributed in nature. It is a powerful bleaching agent and a common disinfectant. Hydrochloric acid is a compound of chlorine and hydrogen. Its uses are numerous. It is employed in making chloride of lime, in the manufacture of gelatine, and, like ammonia, is useful in the chemical laboratory. The name "Royal Water" was once given to a mixture of hydrochloric and nitric acids, because of its power to dissolve gold, the "king of metals."

XC.

Prepare two test-tubes, one containing ammonia-water and the other sulphuric acid in dilution. Into the former dip a slip of blue litmus paper. Observe, color the same. Into the latter dip a similar slip. Observe, color is red. Replunge it into the first tube, and it resumes its blue color. Acid substances redden the litmus dye, and alkaline substances bring back the blue.

The union of an acid and a base forms a salt.

XCI.

Carbon is an extremely important and a very abundant element. It is an essential constituent of the animal, vegetable and mineral kingdoms. All vegetable life is directly dependent upon the presence of the compound of carbon, which exists in the atmosphere. Diamond, the most precious gem, and the hardest known substance, is pure, or nearly pure, carbon. The beautiful stone, so brilliant, so transparent, is of the same element that enters

the chemical composition of the black, friable coal, sold in cart loads for a comparatively small sum.

XCII.

Graphite, or plumbago, is sometimes improperly called black lead, and is familiarly known as material of the common lead-pencil. Amorphous graphite is so soft and unctuous that it is often applied as a lubricator for heavy machinery. At ordinary temperature graphite undergoes no change, therefore it is used for covering iron articles, to prevent their rusting. Its greasy, adhesive qualities render it capable of varnishing iron with a thin, lustrous layer. Common stove-polishes are composed of powdered graphite.

XCIII.

Charcoal is obtained from wood, burned in a certain smothered manner. It is one of the most durable substances. Specimens have been found at Pompeii and upon Egyptian mummies. Charcoal is a disinfecting agent. Its great merit as a disinfectant is that it constantly draws into destruction the offensive matters around it. If placed about the wards of a hospital it removes the unpleasant odors. Charcoal exhibits different degrees of decolorizing power.

Bone-black is of use to sugar-refiners.

Lamp-black is important as a pigment, and is the chief ingredient of printers' ink.

XCIV.

"Tell me, lump of carbon,
Burning lurid in the open grate,
While thy flames rise twisting, turning,
Ages past elucidate."

When coal is sufficiently heated a gas is set at liberty, and along with it many other things. It is marvelous what can be extracted from coal—rich colors, delicate perfumes, nearly a hundred useful substances, and among them flavors for sweetmeats. Coal is not pure carbon, and that which remains after coal has been heated, coke, is contaminated with inorganic matters originally present in the coal.

XCV.

Science has lengthened life; it has mitigated pain, has extinguished diseases, has increased the fertility of the soil, given new security to the mariner, furnished new arms to the warrior, spanned great rivers and estuaries with bridges of form unknown to our fathers; it has guided the thunderbolt innocuously from heaven to earth; it has lighted up the night with splendor of the day; it has extended the range of human vision; it has multiplied the power of the human muscles.—*Macaulay.*

XCVI.

Science has accelerated motion; it has annihilated distance; it has facilitated intercourse, correspondence, all friendly offices, all despatch of business; it has enabled man to descend to the depths of the sea, to soar into the air, to penetrate securely into the noxious recesses of the earth; to traverse the land in cars which whirl along without horses; to cross the ocean in ships which run many knots an hour against the wind. These are but a part of its fruits, for it is a philosophy which never rests, which is never perfect. Its law is progress.—*Macaulay.*

REVIEW LESSONS.

XCVII.	XCVIII.	XCIX.	C.
excellent	monuments	dominion	liberal
commercial	antiquity	romantic	movement
advantages	relics	scenery	domestic
irregularity	situated	maintain	revered
ancient	sluggish	bronze	sacred
orators	cathedral	chariots	responsibility
philosophers	connection	conquered	sentiment
unrivaled	erection	fragments	difficult
architecture	obelisk	invasion	exaggerate
centuries	attained	destroyed	salutary
excavation	comprised	derived	prevalence
various	language	warriors	rural
portions	worshiping	victorious	society
statues	prosperity	completed	festivals
education	period	conquest	holidays
consisted	robust	billows	agreeably
chiefly	sympathies	seaweed	interrupt
physical	slumber	heather	particularly
isles	activity	bowers	observant
eternal	existence	caress	religious
quail	reservoir	reform	inspiring
liberty	fountain	instituted	detail
treasure	included	privileges	antiquarians
famous	oceanic	extended	quaint
established	entire	represents	humorous

CI.	CII.	CIII.	CIV.
burlesque	articles	captured	diseases
pageants	manufactured	wretches	fatherland
abandonment	bayonets	cadaverous	promise
mirth	prisoner	livid	strewed
fellowship	conqueror	complexions	doubled
celebrate	situated	revelry	central
kindliness	galleries	capital	abundant
history	palaces	chivalry	supplies
empress	monarchy	happily	timber
queen	ability	voluptuous	succession
diadem	excelled	marriage	exchanges
worthier	ambition	knell	exiles
prosperous	vanquished	millions	published
auguries	continental	engaged	compared
bounteous	sovereigns	intelligent	elements
jubilee	defeated	ingenious	civilization
republic	finally	thrifty	restraint
majority	innumerable	compelled	absolute
inhabitants	partners	vineyards	czar
latitude	victories	surpasses	legislation
correspond	territory	grouped	occasion
climate	issuing	scientific	dissatisfaction
modify	infantry	libraries	continually
temperature	cannon	museums	suspected
variety	miserable	surrendered	political

CV.	CVI.	CVII.	CVIII.
punished	humid	unsearchable	pocket
severity	camel	unknown	pouch
cautiously	hyena	solar	gleaming
stealthily	scripture	creation	blending
prowling	mention	hoary	witching
hungrily	incident	exhaustless	harmonies
suspicion	wanderings	traversed	height
riveted	entrance	subsides	azure
hereditary	sepulchre	sediment	sphere
affinity	funeral	mysterious	diameter
justice	trampling	executed	circumference
believe	procession	artist	apparently
freedom	distinguished	mummified	reality
security	magnificent	catacombs	constantly
permanent	luxuriant	sphinx	rotating
tyranny	vegetation	pyramids	orbit
faction	gigantic	imperious	technically
slavery	barbarous	solemn	ellipse
populated	simoon	moderate	accurately
plateaus	avoid	elevations	computed
peculiar	suffocation	interior	parallel
historical	freighted	diversified	equator
traditions	merchandise	kangaroo	comprehend
fiercest	unexplored	female	vastness
precious	immense	expanse	imaginary

CIX.	CX.	CXI.	CXII.
circuit	wrists	muscular	semi-transparent
frigid	physician	alimentary	opaque
temperate	pulse	canal	crystallize
torrid	ascertain	liquids	flint
divide	faithful	juices	agate
meridian	servant	glands	chalcedony
longitude	aorta	dissolve	amethyst
organs	permitted	saliva	jasper
circulation	duties	salivary	opal
heart	valves	convert	experiment
blood-vessels	furnish	starch	coarse
hollow	journeys	gastric	readily
arteries	impurities	except	recognize
capillaries	poisonous	secretions	glistening
muscle	sustainer	pancreas	appearance
cavities	tongue	neglected	granular
arterial	teeth	liver	texture
venous	mastication	bile	principal
medium	position	effect	rampart
communications	swallow	fragments	demolished
contract	descend	lustre	limestone
regularity	œsophagus	resist	projecting
expelling	stomach	ordinary	polyp
produce	capable	cobblestones	tentacles
shock	intestines	gravel	skeleton

CXIII.	CXIV.	CXV.	CXVI.
individual	screens	commander	misguided
endures	principle	army	reason
column	received	navy	definition
island	copiously	cabinet	describing
motion	volumes	advisors	colossal
groves	weight	consisting	curbed
decorated	application	administer	quietly
mosses	system	respectively	fertile
lichens	ventilation	department	speculation
enchantment	illustration	affairs	series
exquisite	current	treasury	colonial
yellow	particles	agriculture	accumulated
scarlet	contrary	vice-president	kindled
wrathful	usual	preside	congregation
spirit	practice	senate	basis
transmitted	decidedly	associate	descendant
feathers	area	committed	impulse
generally	population	congress	nourished
conducted	representative	elected	rooted
garments	immigration	senators	vigorous
remain	rapid	popular	fatigue
molecules	remarkable	tumult	considerable
retain	institutions	passion	exercise
corrugated	Americanized	wreaks	preservation
radiators	president	purpose	gracefulness

CXVII.	CXVIII.	CXIX.	CXX.
deportment	frugality	operation	shingle
exhibited	penniless	laziness	wrought-iron
unaffected	singular	travels	diamond
indescribable	brilliant	avarice	pause
dignity	business	assuredly	hinged
haughtiness	career	vanity	estuaries
approach	leisure	contempt	securely
sensible	devoted	supped	fastened
intimacy	electricity	infamy	chimney
ardent	renowned	contrast	affording
respectful	unflinching	familiar	quantity
confirmation	declaration	chinks	ammunition
opportunity	independence	daubed	decision
appointment	penetrate	thatched	distress
diffidence	ambassador	dwellings	relieved
superseded	genius	frame	assistance
rectitude	charming	eighteen	rescued
patronage	conversation	mortised	rebuked
obedient	squander	braced	cowardice
sublime	sluggards	bewildering	disloyalty
spiritual	noxious	enough	appropriately
outward	mischief	carpenter	startling
patriot	borrowing	clapboard	treason
poverty	sorrowing	split-oak	multiplied
forbade	actual	split-cedar	untimely

CXXI.	CXXII.	CXXIII.	CXXIV.
reprimanded	propelling	substituted	ejected
gratify	development	machinery	eruptions
traitor	revolutionize	subjugated	assume
decisive	commerce	contribute	emitted
courser	engineering	annihilate	phenomena
martial	construction	chemistry	subterranean
soldierly	embankments	industrial	rumblings
countenance	equipped	employment	tremor
committee	convenience	properly	preliminary
appreciation	magnitude	essential	globular
oppressors	intricacy	auxiliaries	gaseous
sanctuary	distributed	ceaseless	spectacle
illustrate	correctness	alternately	emission
relation	defective	shelving	frequent
perilous	illegible	retarded	evidence
philosophy	extraordinary	perpendicular	classified
immortal	collection	enormous	periodical
league	curiosities	resemble	quality
auspicious	revolver	interchanged	variable
locomotive	alligators	equatorial	monsoons
engine	cartridges	singularly	miracle
perfection	percussion	benignant	perpetual
pressure	torpedoes	volcanic	evaporate
explosion	utensils	conical	chemical
mechanics	gradually	material	totally

CXXV.	CXXVI.	CXXVII.	CXXVIII.
ammonia	friable	Europe	Frederick
putrefying	graphite	Colosseum	Drachenfels
distillation	plumbago	Forum	steppes
ammoniacal	amorphous	Pantheon	Novgorod
destructive	unction	Tiber	St. Petersburg
solution	lubricator	Vatican	Moscow
reagent	adhesive	Euphrates	Warsaw
laboratory	varnishing	Jesus Christ	Odessa
chlorine	accelerate	Great Britain	Siberia
bleaching	durable	Ireland	Balkan
disinfection	specimens	Abbotsford	Alsace
hydrochloric	offensive	Melrose Abbey	Lorraine
chloride	hospital	Julius Cæsar	Tigris
gelatine	decolorizing	Teutonic	Palestine
mixture	pigment	Westminster	Nazareth
nitric	ingredient	Catholic	Israelites
sulphuric	elucidate	Mediterranean	Canaan
dilution	sufficiently	Bayonne	Jordan
litmus	marvelous	Rouen	Sahara
similar	delicate	Joan of Arc	Egypt
facilitate	contaminated	Seine	Capricorn
resume	inorganic	Napoleon	Pompey
alkaline	innocuously	Waterloo	Crimean
constituent	mitigated	Belgium	Burgoyne
composition	extinguished	Bismarck	Saratoga

SELECTED WORDS.

To be used in sentences by the pupil.

CXXIX.	CXXX.	CXXXI.	CXXXII.
beseech	florist	portico	ballot
indigo	editor	piazza	cupola
cooper	sheriff	veranda	turret
artisan	surgeon	schooner	pier
barber	milliner	balcony	forecastle
cashier	musician	yacht	candidate
attorney	seamstress	alley	minority
caterer	magistrate	awning	bamboo
lavender	satchel	delegate	foliage
architect	gourd	republican	cupboard
carpenter	slaughter	receipt	laurel
alderman	laundress	invoice	customers
nonsense	plumber	election	numeration
trough	tailor	nomination	dividend
secondary	secretary	nursery	subtraction.
accountant	constable	conservative	quotient
burglar	peddler	revenue	minuend
auctioneer	treasurer	anchor	fraction
confectioner	preacher	buoy	freak
apothecary	governor	ceiling	lecture
diary	financier	resolution	modern
besiege	marine	license	heifer
drowsy	democrat	mortgage	doe
mayor	ledger	caucus	subtrahend
druggist	suburbs	sealing	decimal

CXXXIII.	CXXXIV.	CXXXV.	CXXXVI.
groove	endeavor	syllable	salad
dough	pigeon	biscuit	derrick
arsenic	release	sausage	corporal
concrete	buffalo	gingham	artillery
numerator	furious	colonel	commissary
saucily	poultry	yeast	sieve
hound	awkward	rehearse	omelet
strychnine	despotism	grievance	tassel
abstract	pursuit	mustache	gruel
denominator	apparel	criticise	ambulance
salve	luncheon	porridge	chasm
spaniel	recruit	lieutenant	disguise
multiplicand	heroine	cavalry	rogue
discount	fabric	alpaca	plague
treaty	gaiters	calico	autograph
terrier	stencil	ribbon	handkerchief
porcelain	genuine	jealous	pastry
notations	fortress	advertise	trousers
percentage	charade	cambric	skim
cochineal	picnic	muffin	forcible
molasses	legion	sergeant	umbrella
partridge	brigadier	infantry	compliment
meadows	dragoon	knapsack	tough
parrot	arsenal	cayenne	brunette
ostrich	tableau	gossamer	slippery

CXXXVII.	CXXXVIII.	CXXXIX.	CXL.
chronicle	prejudice	unfathomed	piteous
tomato	mucilage	grate	atone
baggage	scissors	ingenuity	manuscript
cucumber	monogram	hoard	immediate
ballad	scythe	kiln	bridal
catalogue	villain	quay	duel
tourist	trellis	conjecture	stationary
onion	acquaint	friar	piety
carrot	choir	loiter	icicle
lettuce	aisle	gaudy	spectator
balance	medley	tennis	ghastly
convince	vestige	adjective	scourge
avalanche	counterfeit	multiplier	wailing
junction	tortoise	masculine	melancholy
cabbage	sanguine	feminine	lessen
persuade	preface	neuter	meddle
celery	auburn	felicity	arches
challenge	nuisance	phrase	fervent
adjourn	dialogue	cancellation	vacant
dungeon	belle	sole	conceit
trivial	heir	deficiency	minstrel
swollen	clause	miniature	hammock
dispatch	faint	veil	feign
cactus	anthem	numb	suitor
cable	curfew	divisible	apartment

CXLI.	CXLII.	CXLIII.	CXLIV.
gesture	sculpture	miscellaneous	comparison
liniment	meteor	contagious	relapse
prophesy	bachelor	prominence	changeable
precedent	fresco	ailment	malaria
partition	behavior	ridiculous	excusable
trait	admirable	serial	zealous
angle	audience	monster	foundry
leather	gorgeous	remittance	simplicity
petition	portrait	preposition	omission
incense	envious	declension	theatre
oasis	vicious	insure	warehouse
criminal	vexation	spasm	bulletin
geyser	vehicle	comical	imbecile
postscript	agency	subject	agony
smuggle	vengeance	predicate	mosque
surveyor	omnibus	imperative	brevity
mosquito	malicious	infinitive	factory
embezzle	regatta	potential	assignment
assault	harass	indicative	synagogue
guilty	reminiscence	subjunctive	dormitory
navigable	frenzy	conjugation	elevator
indelible	amiable	perfection	initial
verdure	righteous	objective	piston
duchess	utilize	possessive	consummation
accurate	perception	nominative	intensify

PART IV.

I.

Plants and animals are mutually dependent upon each other. All forms of animal life absorb the oxygen from the air which they inhale. The carbonic acid gas which is exhaled, while actually poisonous to animals, is an ingredient absolutely required to sustain the life of plants. On the other hand, while the plant is digesting this food it is supplying the oxygen needed to secure the healthfulness of the atmosphere. The wisdom of the Creator is further shown in the fact that winds help to preserve harmony between the plant and animal kingdoms by bearing away the excess of gases to places where it is needed.

II.

Every species of plant and animal life has its own geographical range. This range is determined by temperature, elevation and moisture. When plants or animals are carried from one climate to another, so that a distinct change is effected in their environment, they are liable either to die or to undergo important modifications. Many of our most valuable food plants have been thus transformed. It is said that the Shetland pony and the race horse came from one original stock.

III.

Animal life is dependent upon the food spontaneously provided by nature. Hence, it may be said that the fauna of a country is dependent on its flora. The differences between the animals of the frigid zone and those of the torrid zone are as significant as those which characterize the plants of corresponding latitudes. The physical organization of the animal becomes peculiarly adapted to its environment. To trace the adaptability of various animals to the environment or habitat in which they live, constitutes one of the most instructive lessons in natural history.

IV.

A few examples of the correspondence existing between animals and their surroundings are here quoted. "The reindeer is fitted to browse upon Arctic mosses, and has the instinct of searching for them beneath the snow. The cushioned foot of the camel enables him to tread firmly upon the shifting sand of the desert, while his capacity for carrying an extra supply of water adapts him wonderfully for journeying through its dry and thirsty wilds. The llama was the only beast of burden employed by the native Americans in scaling the snowy heights of the Andes."

V.

All things in the natural world symbolize God, yet none of them speak of Him but in broken and imperfect words. —*H. W. Beecher.*

Nature and truth are one, and immutable and inseparable as beauty and love.—*Mrs. Jamison.*

Nature is a revelation of God; art is a revelation of man.—*Longfellow.*

Laws of nature are God's thoughts, thinking themselves out of the orbits and tides.—*C. H. Parkhurst.*

There is a majesty and mystery in nature, take her as you will.

The essence of poetry comes breathing to a mind that feels, from every province of her empire.—*Thomas Carlyle.*

VI.

The effect of climate upon man is not so marked as upon animals. However, in respect to bodily and intellectual characteristics there are appreciable differences. Unlike the animal, he can protect himself from the severity of the Arctic winter, and from the fierceness of tropical heat. Nevertheless, climate reacts upon him in such a way as to determine his mental and moral peculiarities, industrial habits, social and governmental institutions. To the Caucasian race, by reason of its physical and mental superiority, has been assigned the task of civilizing and enlightening the world.

VII.

The effect of climate upon the character of individuals and of communities is known to be very important. The mind, in its present condition of existence, is dependent for its healthy and vigorous manifestations upon the degree of energy and elasticity with which the physical organs fulfill their functions. The inhabitants of the polar and equatorial regions are subjected to the paralyzing and debilitating influences of the extremes of cold and heat, and, ac-

cordingly, we find their intellectual and moral faculties scarcely susceptible of any considerable development.

In proportion to the salubrity and genial temperament of the climate, the mind in all its powers becomes capable of expanding to a loftier and more substantial flight.—*Randall.*

VIII.

Physical geography exerts an important influence upon the distribution of human labor. It is, therefore, no accident that some people are engaged in fishing, some in mining, and some in agriculture. Our own country furnishes striking illustrations of this law. The valley of the Mississippi is a succession of climatic belts, in which are cultivated those crops that are adapted to the several conditions of soil and climate. Sugar and rice cannot be grown in Minnesota, neither do corn and wheat flourish in Louisiana. In one section we find the country adapted to stock-raising, dairying and wool-growing; in another to mining and manufacturing.

IX.

As commerce is the distribution of the products of human industry, it also is largely influenced by physical causes. Great commercial cities of the world have been situated upon the sea-coast, adjacent to convenient harbors. Such were Venice, Genoa, Constantinople and Antwerp. The ocean has ever been the world's great highway. In recent times new causes have operated to promote industry and commerce. The discovery of gold in California and Australia, the application of steam power to naviga-

tion and overland transportation, and the invention of the telegraph have revolutionized the commerce and industries of the world.

X.

God has connected the labor which is essential to bodily sustenance with the pleasures which are healthiest for the heart; and while he made the ground stubborn, he made its herbage fragrant, and its blossoms fair.—*Ruskin.*

Commerce changes the fate and genius of nations, by communicating arts and opinions, circulating money, and introducing materials of luxury: she first opens and polishes the mind, then corrupts and enervates both that and the body.—*Thomas Gray.*

XI.

Let us never forget that the cultivation of the earth is the most important labor of man. Man may be civilized in some degree without great progress in manufactures, and with little commerce with his distant neighbors. But without the cultivation of the earth, he is, in all countries, a savage. Until he gives up the chase, and fixes himself in some place, and seeks a living from the earth, he is a roaming barbarian. When tillage begins, other arts follow. The farmers, therefore, are the founders of civilization.—*Daniel Webster.*

XII.

The brilliant financial policy of Alexander Hamilton gave added lustre to the administration of Washington. The proposition that all the debts of the Continental Congress, as well as those of the separate states, should be

assumed by the federal government was most far-sighted and sagacious. All merchants and capitalists who were creditors of the states warmly supported Hamilton in securing the adoption of this measure. In order to provide sufficient revenue for the payment of these debts, a moderate tariff was placed upon imported goods. An incidental result of this tariff was the growth of manufacturing interests.

XIII.

In 1800, the seat of the federal government was established at Washington. In 1801, Thomas Jefferson was inaugurated President in the new city. This is one of the few instances wherein a recognized leader has been elevated to the Presidency. Jefferson devised our decimal currency, wrote the Declaration of Independence, and declared against the extension of slavery. He was the founder of the University of Virginia. The purchase of the Louisiana Territory, accomplished during his administration, was a dazzling stroke of genius. For fifteen millions of dollars territory was added to our domain, out of which have been formed no less than fourteen states and territories.

XIV.

We should cherish the idea that while the states have their rights, sacred and inviolable, which we should guard with untiring vigilance, never permitting an encroachment upon them, and ever remembering that such encroachment is as much a violation of the Constitution of the United States as to encroach upon the rights of the general government; still bear in mind that the states are

but subordinate parts of one great nation, that the nation is over all, even as God is over the universe.—*Oliver P. Morton.*

XV.

There is a great difference between nationality and race. Nationality is the miracle of political independence. Race is the principle of physical analogy.—*Disraeli.*

A people that studies its own past and rejoices in the nation's proud memories is likely to be a patriotic people, the bulwark of law and the courageous champion of right in the hour of need.—*Joseph Anderson.*

XVI.

The invention of the cotton gin, a machine for separating the cotton fibre from the seed, by Eli Whitney, in 1793, greatly increased the demand for cheap labor in the South. Thus the institution of negro slavery became a bulwark of prosperity in the Southern States. By the famous compromise of 1820, Missouri was admitted to the Union as a slave state; but slavery was forever prohibited north of the parallel of 36° 30′. Party strife raged fiercely while this question was pending, and much sectional feeling was aroused.

XVII.

The principal events of Jackson's administration were the introduction of the "Spoils System" and the discussion in Congress upon the doctrine of nullification. Daniel Webster attained the summit of his fame as an orator

in a speech in reply to Senator Hayne of South Carolina, opposing this doctrine. In 1832, Jackson vetoed the bill for the recharter of the United States Bank. The removal of the public money from this bank and its distribution among the state banks, excited much indignation among Jackson's political opponents. This led to a quarrel with Congress which lasted throughout his term of office.

XVIII.

Our government has been tried in peace, and it has been tried in war, and has proved itself fit for both. It has been assailed from without, and it has successfully resisted the shock; it has been disturbed within, and it has effectually quieted the disturbance. It can stand trial, it can stand assail, it can stand adversity, it can stand everything but the marring of its own beauty and the weakening of its own strength. It can stand everything but the effects of our own rashness and our own folly. It can stand everything but disorganization, disunion, and nullification.—*Daniel Webster.*

XIX.

From Jackson's last administration to the Civil War was a period of industrial progress and westward expansion. The invention of the steam engine and many other labor-saving machines gave a wonderful impulse to new enterprises and accelerated the growth of cities. The enormous territory acquired at the close of the war with Mexico stimulated western immigration and extended our boundaries to the shores of the Pacific. Our promise of future greatness was only shadowed by the dark cloud

of slavery and the bitter feeling which its existence occasioned between the North and the South.

XX.

Measure slavery by the Golden Rule, and where is it? It stands in the way of that automatic instinct of progress which is eternal in the human race and irresistible in human history.—*Theodore Parker.*

Every benefit which slavery conferred upon those subject to it, all the ameliorating and humanizing tendencies it introduced into the life of the African, all the elevating agencies which lifted him higher in the scale of rational moral being, were the elements of the future and inevitable destruction of the system.—*L. Q. C. Lamar.*

XXI.

Abraham Lincoln was inaugurated President of the United States, March 4th, 1861, and was assassinated in April, 1865. He was a conspicuous example of a man rising from obscurity to the loftiest altitudes of human grandeur and honor. In the perspective of history, his memory is destined to shine with increasing effulgence. The nations of the earth have written the name of Lincoln among the immortal heroes of modern times. The Union free, prosperous and great, is his true and appropriate monument.

XXII.

Human glory is often as fickle as the winds and transient as a summer day; but Abraham Lincoln's place in history is assured. All the symbols of this world's admiration are his. He is embalmed in song; recorded

in history; eulogized in panegyrics; cast in marble; painted on canvas; enshrined in the hearts of his countrymen; and lives in the memories of mankind. Some men are brilliant in their times, but their words and deeds are of little worth to history; but his mission was as large as his country, vast as humanity, enduring as time.—*John P. Newman.*

XXIII.

The era of reconstruction called for the solution of many new problems in government. Congress passed, in 1865, a thirteenth amendment to the Constitution, abolishing slavery. The Southern States ratified this amendment, repealed the ordinances of secession, and repudiated the Confederate war debt. A Civil Rights bill was passed, which guaranteed rights of citizenship to negroes. In 1867 the territory of Alaska was purchased from Russia for $7,200,000. During the administration of Gen. Grant a treaty was arranged between Great Britain and the United States, whereby the Alabama claims were submitted to a board of arbitration.

XXIV.

In 1870, the fifteenth amendment to the Constitution was adopted. This provided that "the right of the citizens of the United States to vote shall not be denied or abridged by the United States, or any state, on account of race, color, or previous condition of servitude." The administration of President Hayes was signalized by several important events: First, the withdrawal of federal troops from the South; second, the passage of the

Bland Silver Bill; and third, the resumption of specie payments. Civil service reform first received serious attention during the administration of President Arthur.

XXV.

The noble Nation is before my soul's vision. Grand in stature, comely in every feature, buoyant in the freshness of morning youth, matronly in prudent stepping, the ethereal breezes of liberty waving with loving touch her tresses, she is, no one seeing her doubts, the queen, the conqueror, the mistress, the teacher of the coming ages. To her keeping the Creator has intrusted a great continent, whose shores two oceans lave, rich in all nature's gifts; embosoming useful and precious minerals, fertile in soil, salubrious in air, beauteous in vesture.—*Bishop Ireland.*

XXVI.

There is no organization of life, individual and simple, or associated and complex, in which the instinct, impulse, or idea of self-preservation, is not the predominant one. We fought the war of the Revolution to establish our nationality, and the war of the Rebellion to maintain it. We have spent, first and last, incalculable blood and treasure to establish and keep our national life intact, and the national policy, with relation to public schools, is part and parcel of that all-subordinating determination to secure the perpetuity of the state. Men make better citizens for being educated. The higher the popular intellect is raised, the more intelligent and independent will be its vote.—*Holland.*

XXVII.

One of the greatest reforms in our government, made in recent years, has been in the method of filling appointments to office. Ever since the presidency of Jackson, political offices have been the prizes of party service. Every new president, upon his accession to office, has been beset by hordes of hungry place-seekers. Senators and representatives insisted upon their right to distribute salaried positions without regard to qualifications or efficiency. The abuses under this system were of such magnitude that an enlightened public conscience expressed its abhorrence. Civil service reform has made such progress in both national and state governments that the change amounts almost to a revolution.

XXVIII.

The expenses of government are met by taxation. The citizen of any town or city usually receives one bill annually from the tax assessors for his share of the expenses of the town, county and state governments. These taxes are computed at a given rate per cent. upon property, real and personal. The national government is supported by indirect taxation, that is, by a tariff on imported goods and a tax on various home products, which is known as internal revenue. Public sentiment has greatly changed its opinion concerning the question, What are the legitimate purposes of taxation? Education and the requirements of public health and convenience make increasing demands upon the public treasury.

XXIX.

"Taxes, no matter how collected, are ultimately paid by the producers of the country, the men who, by manual

or mental labor, create commodities. By far the largest proportion of taxes are, therefore, paid by manual labor, crude and skilled. The cost of maintaining the federal, state and municipal governments, and the payment of indebtedness, principal and interest, are the sum of taxes laid. The cost is enhanced by lack of intelligence on the part of officials and of legislators employing many to do the work of a few, and by ill-advised economy.

"After a period of fraud, recklessness, neglect, and extravagance, we go through a period of injudicious parsimony equally subversive of the public interests."

XXX.

The manufacturing industries of the country are now carried on under a system in which large numbers of workmen are grouped under one management. Under this system there is a great gain of economy and efficiency; the subdivision of labor, the multiplication of machinery, greatly cheapen production.

The man who has the organizing ability to bring a thousand workmen together, and keep them steadily employed, cheaply and skilfully to produce the materials for their labor, is entitled to a large reward for this difficult service. —*Gladden.*

XXXI.

The greatest opportunities of this generation, the opportunities of Christian leadership, of Christian statesmanship, are offered to the employers of labor. They are called to moralize the industrial realm, whose ruling law has hitherto been pagan. They are called to lead in that peaceful reconstruction of our industries, by which labor and capital

shall be identified in interest and feeling, and peace shall be established among men.—*Gladden.*

XXXII.

"Manual labor is an honorable calling. Modern writers in the interest of labor have asserted this in various forms, and on all occasions. Capitalists, merchants, and the professions have universally accepted the proposition as true, and in this country, at least, their attitude towards labor is one of regard and good feeling. The true laborer is proud of his vocation, proud of his name, proud of the work he does."

XXXIII.

"Wealth serves as a passport to society. A rich man is believed to possess merits that have made him rich, or if his wealth is inherited, a certain breeding and education, which make him an acceptable associate. The majority of rich men fully answer this description; they are well-informed, shrewd, just, and polite, prompt in fulfilling their engagements, and generous in their dealings. Those who form the exception to this rule drop out of society very soon, are doomed to an inevitable isolation, and live and trade under a surveillance of universal suspicion."

XXXIV.

Nerves are fine threads which pervade all parts of the body. Some carry sensations from without, others convey orders of motion from within. The former are called sensory nerves; the latter, motor nerves. The spinal cord, consisting of white and gray matter, lies within the spinal canal. Between every two vertebræ, nerves shoot forth to allotted parts of the body. The cerebrum occupies nine-

tenths of the cavity of the skull. The cerebellum is known as "little brain." In the brain intelligence resides, sensations are perceived, ideas are formed, and the will originates.

XXXV.

Although the special senses are said to be modifications of the sense of touch, the approximate information gained through touch and taste must result from contact with objects, while smell, hearing and sight can detect objects at a distance. The seat of the sense of smell resides in the mucous membrane lining the cavities of the nose. This sense is acute among savages, but the dog far surpasses man. For recognition of his master he depends on smell more than sight.

XXXVI.

Certain impressions are produced by means of vibrations, and are transmitted to the brain by a special apparatus called the ear.

Consider the extraordinary delicacy of the eye as an organ of sense. Here is a stimulus of unknown origin, which traverses the widest regions of space, and enables us to appreciate the existence of form, and even structure, of bodies billions of miles away, and gives us more knowledge of the external world, perhaps, than all the other senses together; and yet, its real nature is as hidden and mysterious and impalpable as the nature of our consciousness.—*Roger S. Tracy.*

XXXVII.

Lodestone is a particular kind of iron ore, or a natural magnet, possessing the power of attracting iron. A bar

of steel rubbed against lodestone will manifest magnetic properties. Experimenting with sprinklings of iron filings verifies the statement—attraction is greatest at the ends, or poles, and diminishes towards the central, or neutral line. The compass, so essential to mariners, is merely a magnetic needle placed on a pivot. When at rest, the needle points towards the earth's north and south magnetic poles.

XXXVIII.

Bodies can be electrified by friction, by contact, or by induction. Certain substances are conductors of electricity; others, non-conductors or insulators. Bodies charged with opposite kinds attract; those charged with the same kind repel. Batteries give both negative and positive electricity. By uniting the wires of opposite poles an electric current is obtained. Electricity tends to concentrate and discharge at the pointed end of a good conductor. When sparks pass between two points of carbon a light is produced. The telegraph and telephone are results of the application of electricity. A lifetime would be required to study half its marvels.

XXXIX.

It would be unjust to deny that Charles I had some of the qualities of a good, and even of a great, prince. He wrote and spoke, not like his father with the exactness of a professor, but after the fashion of intelligent and well-educated gentlemen. His taste in literature and art was excellent, his manner dignified though not gracious, his domestic life without blemish. Faithlessness was the chief cause of his disasters and is the chief stain on his

memory. He was, in truth, impelled by an incurable propensity to dark and crooked ways. It may seem strange that his conscience which, on occasions of little moment, was sufficiently sensitive, should never have reproached him with his great vice.—*Macaulay.*

XL.

The stubborn courage characteristic of the English people was, by the system of Cromwell, at once regulated and stimulated. Other leaders have maintained order as strict. Other leaders have inspired their followers with a zeal as ardent. But in his camp alone the most rigid discipline was found in company with the fiercest enthusiasm. His troops moved to victory with the precision of machines, while burning with the wildest fanaticism of crusaders. From the time when the army was remodelled, to the time when it was disbanded, it never found, either in the British Islands or on the Continent, an enemy who could stand its onset.—*Macaulay.*

XLI.

The history of Monmouth would alone suffice to refute the imputation of inconstancy which is so frequently thrown on the common people. The common people are sometimes inconstant, for they are human beings. But that they are inconstant as compared with the educated classes, with aristocracies, or with princes, may be confidently denied. It would be easy to name demagogues whose popularity has remained undiminished while sovereigns and parliaments have withdrawn their confidence from a long succession of statesmen.—*Macaulay.*

XLII.

The Puritans were men who derived a peculiar character from the daily contemplation of superior beings and eternal interests. Not content with acknowledging in general terms an overpowering Providence, they habitually ascribed every event to the will of God, for whose power nothing was too vast, for whose inspection nothing was too minute. To know Him, to serve Him, to enjoy Him, was with them the great end of existence. They rejected with contempt the ceremonious homage which other sects substituted for the pure worship of the soul. They aspired to gaze upon the intolerable brightness of the Deity, and to commune with Him face to face. Hence their contempt for worldly distinction.—*Macaulay.*

XLIII.

What reflecting American does not acknowledge the incalculable advantages derived in this land, out of the deep foundations of civil, moral, and intellectual truth from which we have drawn in England? What American does not feel proud that his fathers were the countrymen of Bacon, of Newton, and of Locke? Who does not know that every pulse of civil liberty in the heart of our ancestors, the sobriety, the firmness, and the dignity with which the cause of free principles came into existence here, constantly found encouragement from the friends of Liberty there? For myself, I can truly say that, after my native land, I feel a strong reverence for that of my fathers.—*Edward Everett.*

XLIV.

Wherever literature consoles sorrow or assuages pain; wherever it brings gladness to eyes which fail with wake-

fulness and tears, and ache for the dark house and the long sleep—there is exhibited in its noblest form the immortal influence of Athens.

In the Great Abbey, which has, during many ages, afforded a quiet resting-place to those whose minds and bodies have been shattered by the contentions of the Great Hall, the dust of the illustrious accused should have mingled with the dust of the illustrious accusers.—*Macaulay.*

XLV.

The quality of mercy is not strained,
It droppeth as the gentle rain from heaven
Upon the place beneath. It is twice blest:
It blesseth him that gives and him that takes.
It is mightiest in the mightiest; it becomes
The thronéd monarch better than his crown;
His sceptre shows the force of temporal power,
The attribute to awe and majesty,
Wherein does sit the dread and fear of kings.
But mercy is above this sceptred sway;
It is enthroned in the hearts of kings;
It is an attribute to God Himself.

—*Shakespeare.*

XLVI.

Books are our most steadfast friends; they are our resource in loneliness; they go with us on our journeys; they await our return; they are our best company; they are a refuge in pain; they breathe peace upon our troubles; they await age as ministers of youth and cheer; they bring the whole world of men and things to our feet; they put us in the centre of the world; they summon us away from our narrow life to their greatness, from our ignorance to their wisdom, from our partial or distem-

pered vision to their calm and universal verdicts.—*T. T. Munger.*

XLVII.

Art is intended to make us contemplate the true and the infinite in forms of sense. Yet even art does not fully satisfy the deepest need of the soul. The soul wants to contemplate truth in its inmost consciousness. Religion is placed above the dominion of art.—*Schiller.*

Fashion is an odd jumble of contradictions, of sympathies and antipathies. It exists only by its being participated in by a certain number of persons, and its essence is destroyed by being communicated to a greater number. . . . Fashion constantly begins and ends in the two things it abhors most—singularity and vulgarity.—*Hazlitt.*

XLVIII.

The whole function of the artist in the world is to be a seeing and a feeling creature; to be an instrument of such tendencies and sensitiveness that no shadow, no hue, no line, no instantaneous and evanescent expression of the visible things around him, nor any of the emotions which they are capable of conveying to the spirit which has been given him, shall either be left unrecorded, or fade from the book of record.—*Ruskin.*

Freedom in a democracy is the glory of the State, and, therefore, in a democracy only will the freeman of Nature deign to dwell.—*Plato.*

XLIX.

Culture implies all which gives the mind possession of its own power, as languages to the critic, telescope to the astronomer. Culture alters the political status of an individual. It raises a rival royalty in a monarchy. 'Tis

king against king. It is ever the romance of history in all dynasties—the copresence of the revolutionary force in intellect. It creates a personal independence which the monarch cannot look down, and to which he must often succumb.—*Ralph Waldo Emerson.*

Culture, merely for culture's sake, can never be anything but a sapless root, capable of producing at best a shrivelled branch.—*Y. W. Cross.*

L.

Every faculty of the mind, like every organ of the body, must have its appropriate culture. The cultivation of the memory and the reasoning powers can not take the place or supersede the necessity of cultivating the taste and the imagination. The exercise of the hands and feet is no substitute for the training of the voice. Still less can the discipline of the mind supersede the training of the body, and of itself secure bodily health, beauty of person, or grace in action. Good writing, like everything else in our world, has a body as well as a soul; and the body as well as the soul must have its specific care and culture. —*Tyler.*

LI.

The awakening of our best sympathies, the cultivation of our best and purest tastes, strengthening the desire to be useful and good, and directing youthful ambition to unselfish ends—such are the objects of true education.—*J. T. Headley.*

An earthly immortality belongs to a great and good character. History embalms it; it lives in its moral influence, in its authority, in its example, in the memory of the words and deeds in which it was manifested; and as

every age adds to the illustrations of its efficacy, it may chance to be the best understood by a remote posterity. —*Edward Everett.*

LII.

The skin forms two layers, the derma, or true skin, and its protecting covering, or epidermis, which is continually destroyed and reproduced. The derma is a dense membrane, containing nerves, blood-vessels, oil-glands, lymphatic glands and perspiratory glands. Each performs its appointed function, to secrete, absorb, or excrete. The constant accumulation of the worn out parts of the epidermis necessitates bathing. Many skin diseases are caused by insufficient attention to cleanliness.

LIII.

A partial vocabulary relating to disease may be named in two paragraphs:—

Medicine, diphtheria, rheumatism, remedy, ague, cough, bilious, croup, cancer, fever, catarrh, typhoid, cholera, consumption, measles, symptom, asthma, malaria, scrofula, bronchitis, pleurisy, phthisic, neuralgia, dyspepsia and pneumonia.

Anatomy, hygiene, periosteum, cartilage, ligaments, muscles, fractures, exhaustion, beverages, appetite, effervescent, condiments, irritant, corpuscles, coagulation, trachea, glottis, diaphragm, asphyxia, resuscitation and inflammation.

LIV.

A broad field of botanical study is embodied in the following topics: Absorption, conduction, transpiration, assimilation, translocation, respiration and reproduction.

The ovules are fertilized by the pollen. The pollen reaches the ovule, and sets up the peculiar growth upon its moist and permeable tissue, which results in the production of an embryo.

Dandelion, hepatica, arbutus, orchis, anemone, balsam, gentian, peony, fuchsia, dahlia, daffodil, heliotrope, wistaria, hyacinth, alyssum, verbena, magnolia, golden-rod, mignonette and chrysanthemum are common names of flowers.

LV.

Geology, since the earliest periods, has appealed to different sides of human character. Man bows in reverence to worship mysterious nature or explore the rocks in quest of mineral treasures. The orthography and etymology of the language of rocks lie in the province of mineralogy, and the syntax and prosody belong to the realm of geology. In a language of which the letters are minerals, and the words are rock-types, is written for us the whole story of terrestrial evolution, through

> "The fairy tales of science
> And the long results of time."

LVI.

"Except for a very thin covering of vegetable soil, which is a kind of epidermis, the crust of the earth is composed of materials to which the name rock is applied, even when, like sand and clay, they are of little coherency. All of these masses have been formed successively, during periods of extremely long duration, and in the midst of conditions of which they bear in themselves the characteristic marks. They are veritable monuments, which delineate in their essential traits the successive revolutions of our globe."

LVII.

The rocks constituting the greater part of the continents are called stratified, because they are divided into large parallel layers, to which is given the name strata or beds. Rocks of this category, whatever their composition, have been formed in the seas and lakes by sediments and organisms. A sure proof of this truth is furnished by the pebbles and sands, and the innumerable remains of fossilized marine animals are a still more eloquent testimony to it. Having risen from very deep regions, they are designated as eruptive rocks.—*G. A. Daubrie.*

LVIII.

The existence of boulders, miles removed from their parent rocks, can only be explained by the transporting agency of glaciers, which in former ages moved in rivers of ice down the mountain sides, floated their melting icebergs, and deposited their loads of rocky debris in valleys which were then bottoms of unknown seas. Nothing in nature is more grand than the vast glacier in its slow but constant movement. Many of the rocks seen upon our hillsides are results of ancient glacial drift.

LIX.

The breathing of the earth affords a wide field for scientific activity and gives rise to fanciful theories as to its cause. Statistics of earthquakes tend to corroborate the scientific suggestion that the primary cause resides in the upper layers of the earth's crust, and the motive power is, directly or indirectly, the internal heat of the earth. The earth is shaken by tremors so incessant that there is never a moment of perfect rest, and so minute as to remain unsuspected without the intervention of the most delicate instruments.—*G. H. Darwin.*

REVIEW LESSONS.

LX.	LXI.	LXII.	LXIII.
mutually	essence	corrupt	bulwark
carbonic	appreciable	communicating	champion
absolutely	severity	enervate	compromise
preserve	tropical	neighbors	prohibited
healthfulness	governmental	financial	sectional
harmony	communities	proposition	discussion
species	vigorous	sagacious	doctrine
geographical	manifestations	capitalists	nullification
environment	elasticity	creditors	recharter
liable	functions	revenue	opponents
modification	paralyzing	tariff	adversity
valuable	debilitating	incidental	enterprise
spontaneously	faculties	federal	stimulated
significant	susceptible	inaugurated	emigration
characterize	salubrity	presidency	boundaries
peculiarly	substantial	decimal	automatic
adaptability	distribution	currency	irresistible
cushioned	accident	university	ameliorating
capacity	climatic	dazzling	humanizing
journeying	adjacent	inviolable	rational
llama	operated	untiring	inevitable
symbolize	navigation	vigilance	assassinated
immutable	invention	encroachment	conspicuous
revelation	telegraph	subordinate	obscurity
mystery	herbage	analogy	attitudes

LXIV.	LXV.	LXVI.	LXVII.
perspective	ethereal	injudicious	batteries
destined	associated	parsimony	negative
transient	preservation	subdivision	positive
admiration	predominant	multiplication	physiological
eulogized	rebellion	moralize	concentrate
panegyric	incalculable	identified	lightning
enshrined	salaried	honorable	literature
reconstruction	qualifications	vocation	gracious
solution	efficiency	inherited	domestic
amendment	magnitude	acceptable	blemish
abolishing	conscience	shrewd	disasters
ratified	abhorrence	isolation	incurable
ordinances	annually	surveillance	propensity
secession	assessors	suspicion	enthusiasm
repudiated	sentiment	sensory	fanaticism
guaranteed	legitimate	spinal	crusaders
arbitration	ultimately	vertebræ	suffice
abridged	manual	cerebrum	refute
previous	commodities	cerebellum	imputation
servitude	municipal	approximate	inconstancy
signalize	indebtedness	mucous	aristocracies
resumption	enhanced	membrane	demagogues
comely	economy	vibrations	parliaments
buoyant	extravagance	apparatus	contemplations
matronly	subversive	impalpable	habitually

LXVIII.	LXIX.	LXX.	LXXI.
ceremonious	antipathies	oil-glands	phthisic
homage	jumble	lymphatic	neuralgia
intolerable	participated	perspiratory	dyspepsia
commune	communicated	secrete	pneumonia
foundations	singularity	accumulation	anatomy
ancestors	vulgarity	vocabulary	hygiene
sobriety	instrument	paragraph	periosteum
assuages	instantaneous	medicine	cartilage
reconciliation	evanescent	diphtheria	ligaments
enmities	democracy	rheumatism	fractures
generations	deign	remedy	exhaustion
contention	telescope	ague	beverages
sceptre	astronomer	bilious	appetite
temporal	dynasties	catarrh	effervescent
steadfast	romance	cancer	condiments
resource	succumb	typhoid	irritant
loneliness	shrivelled	cholera	corpuscles
ignorance	appropriate	consumption	coagulation
distempered	supersede	measles	trachea
universal	inauguration	symptoms	glottis
verdict	manifested	asthma	diaphragm
infinite	efficacy	malaria	asphyxia
dominion	posterity	scrofula	resuscitation
contradiction	derma	bronchitis	inflammation
sympathies	epidermis	pleurisy	botanical

LXXII.	LXXIII.	LXXIV.	LXXV.
transpiration	geology	sassafras	equilibrium
assimilation	orthography	penury	obtainable
translocation	etymology	contagion	mercurial
respiration	mineralogy	epidemic	orifice
presumable	syntax	antagonist	enumerate
embryo	prosody	pauperism	obstinacy
refraction	terrestrial	susceptibility	syllabus
arbutus	evolution	vicissitude	monopoly
orchis	veritable	phæton	heterogeneous
anemone	delineate	reprimand	epilepsy
gentian	stratified	encyclopædia	Episcopal
balsam	category	pendulum	emissary
peony	sediments	admonish	stereopticon
fuchsia	fossilize	authenticity	grammatical
dahlia	eloquent	coalition	plagiarism
daffodil	designated	innuendo	purveyance
heliotrope	boulders	insinuate	putrefy
wistaria	glaciers	raspberry	recurrent
hyacinth	debris	chaos	rejuvenate
alyssum	iceberg	asparagus	residual
verbena	inimical	catastrophe	retaliate
magnolia	insurgent	honeysuckle	Unitarian
mignonette	intervention	reconnoiter	sedulous
chrysanthemum	incessant	rhubarb	sedentary
statistics	corroborate	subservience	similitude

SELECTED WORDS.

To be written in sentences by the pupil.

LXXVI.	LXXVII.	LXXVIII.	LXXIX.
aggression	quarrel	kerosene	defraud
escort	juvenile	deciduous	seminary
regalia	rotunda	perennial	purgatory
enlivening	formidable	exotic	benefactor
converse	vestibule	discretion	arbitration
movable	cemetery	trustee	caprice
invalid	pedestal	transgression	preliminary
noticeable	beguile	superintendent	atrocious
gallant	minaret	librarian	faucet
angrily	deficit	abdomen	proprietor
manageable	balustrade	census	combatant
allaying	urgency	missive	persecute
annoyance	unrelenting	acclimate	obstacle
fidelity	solitary	fantastic	etiquette
assertion	ridicule	telegraphy	applaud
shrubbery	confusion	adroit	lozenge
equipage	tapioca	photographer	agility
construe	excursion	audible	pinnacle
lenient	incision	deception	hurricane
mercantile	saleratus	decency	tabernacle
hypocrisy	hominy	penitent	angelic
magician	chocolate	sensitive	theatrical
covetous	precision	pervade	embalm
chiseled	convulsion	livery	surgical
gossip	sundries	drudgery	fascinate

LXXX.	LXXXI.	LXXXII.	LXXXIII.
skeptical	sacrament	paternal	synopsis
restaurant	carnival	magazine	antecedent
crinoline	deficiency	polygon	acquiesce
spectre	punctuality	homœopathy	analysis
linguist	requisite	athlete	glycerine
nymph	apostle	graphic	idiom
rudiments	velocity	vindictive	interrogative
phantom	idolatry	hemorrhage	amateur
ogre	commemorate	zoölogy	satellite
hostility	forfeiture	notification	caterpillar
volunteer	radiant	expedient	oriental
humility	prevalence	technical	pestilence
frivolity	proclamation	biography	suffocate
artificial	maintenance	aqueducts	antediluvian
auditor	exorbitant	masquerade	dilemma
hideous	energetic	relinquish	contralto
notary	consonant	soliloquy	depreciate
pathos	signature	version	antedate
microscope	coupon	aborigines	marauder
filial	chastisement	antagonist	effervesce
barometer	blasphemous	pittance	collapse
phonograph	belligerent	conspiracy	appendix
verdict	ambuscade	apology	transmigration
erroneous	furlough	promiscuous	scheme
prodigal	demonstrate	emphasis	semicolon

LXXXIV.	LXXXV.	LXXXVI.	LXXXVII.
tantalize	filigree	hyphen	urbane
tedious	credential	vogue	vitiate
prematûre	fumigate	exhilarate	affable
colleague	sanction	litigation	lucrative
atheist	caricature	macaroni	astringent
schedule	fluctuate	prolific	vehemence
antidote	condolence	affidavit	metaphor
hyperborean	canine	integrity	oscillate
synonym	falcon	codicil	coalesce
anarchist	monastery	fortitude	obsolete
catechism	benzine	harangue	pavilion
anomaly	taciturn	macaroon	souvenir
symphony	morphine	vermilion	cologne
antipathy	nausea	cylinder	sedition
anonymous	stereotype	grotesque	turpentine
resurrection	vanilla	luscious	bashful
pernicious	incendiary	delude	parallelogram
pilgrimage	pecuniary	recipient	chronic
retaliate	sonorous	parasite	vaccinate
coercion	philanthropy	ludicrous	convalesce
alacrity	vagrant	loquacious	telescope
mathematical	feasible	allegory	chloroform
fraternity	penitentiary	manœuver	chronometer
fallible	tragedian	garrulous	magnesia
mercenary	phenomenon	weird	tincture

ABBREVIATIONS USED IN WRITING AND PRINTING.

A. B.—Bachelor of Arts
Acct.—Account
A. D.—In the year of our Lord
Ad. lib.—At pleasure
Admr.—Administrator
Admx.—Administratrix
Agt.—Agent
Ala.—Alabama
A. M.—Master of Arts; Before noon
An.—In the year
Anon.—Anonymous
Ans.—Answer
Apr.—April
Arith.—Arithmetic
Ark.—Arkansas
Aug.—August
Bal.—Balance
B. C.—Before Christ
Bro.—Brother
Bros.—Brothers
Bush.—Bushel
C.—One hundred
Cal.—California
Cap.—Capital
Capt.—Captain
C. E.—Civil Engineer
Chap.—Chapter
Chas.—Charles
Co.—Company; County
C. O. D.—Cash on Delivery
Col.—Colonel
Coll.—College
Conn.—Connecticut
Cor. Sec.—Corresponding Secretary
Cr.—Credit; Creditor
Cts.—Cents
Cwt.—Hundredweight
D. C.—District of Columbia
D. D.—Doctor of Divinity
Dea.—Deacon
Del.—Delaware
Dept.—Department
Doz.—Dozen
Dr.—Debtor; Doctor
E.—East
Ed.—Editor; Edition
e. g.—For example
Eng.—England
Esq.—Esquire
Etc.—And others; and soforth; and the like
Ex.—Example; Exodus
Feb.—February
Flor.—Florida
Fri.—Friday
F. R. S.—Fellow of the Royal Society
Ga.—Georgia
G. B.—Great Britain
Gen.—General
Geo.—George
Gov.—Governor
Hhd.—Hogshead
Hon.—Honorable
H. R.—House of Representatives
Id.—The same

i. e.—That is
I.H.S.—Jesus the Saviour of Men
Ind.—Indiana
Ill.—Illinois
Inst.—Instant
Int.—Interest
Ia.—Iowa
I. O. U.—I owe you
It. or Ital.—Italic; Italian
Jan.—January
Jr.—Junior
Kan.—Kansas
Ken.—Kentucky
£.—Pound sterling
La.—Louisiana
L. I.—Long Island
Lib.—Librarian
Lieut.—Lieutenant
LL. B.—Bachelor of Laws
LL. D.—Doctor of Laws
Long.—Longitude
Lou., La.—Louisiana
L. S.—Place of the Seal
M.—Marquis; Monsieur; Thousand; Meridian; Noon
M. A.—Master of Arts
Maj.—Major
Mar.—March
Mass.—Massachusetts
M. C.—Member of Congress
M. D.—Doctor of Medicine
Md.—Maryland
Me.—Maine
Messrs.—Gentlemen; Sirs
Mich.—Michigan
Minn.—Minnesota
Miss.—Mississippi
Mme.—Madame
Mo.—Missouri
Mon.—Monday; Montana
M. P.—Member of Parliament
Mr.—Master or Mister
Mrs.—Mistress or Misses
Mt.—Mount or Mountain
N.—North
N. A.—North America
N. B.—Take Notice
N. C.—North Carolina
N. D.—North Dakota
N. E.—North East; New England
Neb.—Nebraska
N. H.—New Hampshire
N. J.—New Jersey
No.—Number
Nov.—Novembe.
N. S.—Nova Scotia; New Style
N. Y.—New York
O.—Ohio
Oct.—October
Or.—Oregon
O. S.—Old Style
Penn.—Pennsylvania
Per annum.—By the year
Per cent.—By the hundred
pp.—Pages
Ph. D.—Doctor of Philosophy
Phila.—Philadelphia
P. M.—Post-master; Afternoon
P. O.—Post-office
Pres.—President
Prof.—Professor
Pro tem.—For the time being
Prox.—Of the next month
P. S.—Postscript
Rec. Sec.—Recording Secretary
Rev.—Reverend
R. I.—Rhode Island
R. R.—Railroad

S.—South
S. A.—South America
Sat.—Saturday
S. C.—South Carolina
S. D.—South Dakota
Sec.—Secretary
Sept.—September
Sq.—Square
S. T. D.—Doctor of Divinity
Sun.—Sunday
Supt.—Superintendent
Tenn.—Tennessee
Tex.—Texas
Thurs.—Thursday
Univ.—University
U. S.—United States
U. S. A.—United States of America; United States Army
Va.—Virginia
Viz.—Namely; to wit
Vol.—Volume
Vs.—Against; In opposition
Vt.—Vermont
W.—West; Welsh
Wash.—Washington
Wed.—Wednesday
W. I.—West Indies
Wis.—Wisconsin
W. Va.—West Virginia
Yds.—Yards

LATIN WORDS AND PHRASES.

Ab initio—From the beginning
Ad infinitum—To infinity
Ad interim—In the meanwhile
Ad libitum—At pleasure
Ad valorem—According to value
Alias—Otherwise
Alibi—Elsewhere
Amor patriæ—Love of one's country
Anno Domini—In the year of our Lord
Ante bellum—Before the war
Ante meridiem—Before noon
A priori—From cause to effect
Bona fide—In good faith
De facto—From the fact
Dei gratia—By the grace of God
De novo—Anew
Deo volente—God willing
De profundis—Out of the depths
Disjecta membra—Scattered remains
Ecce homo—Behold the man
E pluribus unum—One out of many
Erratum—An error
Exeunt—They go out
Ex officio—By virtue of his office
Ex parte—On one side only
Extempore—Without premeditation
Fac simile—A close imitation
Festina lente—Hasten slowly
Fortiter in re—Firm in action

Gloria in excelsis—Glory to God in the highest
Id est—That is
In extenso—At length; in full
In extremis—At the point of death
Incognito—Unknown
In loco parentis—In the place of a parent
In memoriam—In memory
In statu quo—In the former state
Interim—In the meanwhile
In transitu—On the passage
Inter nos—Between ourselves
Ipse dixit—He himself said it
Lapsus linguæ—Slip of the tongue
Laus Deo—Praise to God
Memoriter—By rote
Mens sana in corpore sano—A sound mind in a sound body
Mirabile dictu—Wonderful to be told
Modus operandi—Manner of operation
Multum in parvo—Much in little
Mutatis mutandis—The necessary changes being made
Nolens volens—Willing or not
Nolle prosequi—Unwilling to proceed
Non sequitur—It does not follow
Nota bene—Mark well
Per annum—By the year
Per capita—By the head
Per centum—By the hundred
Per diem—By the day
Per se—By itself
Post mortem—After death
Pro bono publico—For the public good
Pro rata—In proportion
Quid pro quo—An equivalent
Sine die—Without day
Sine qua non—An indispensable condition
Ultimatum—The last condition
Verbatim et literatim—Word for word and letter for letter
Via—By the way
Vice versa—The terms being exchanged
Viva voce—By the living voice

FRENCH WORDS AND PHRASES.

A la mode—In the fashion
A propos—To the point
Au contraire—On the contrary
Au fait—Skilful; expert
Au fond—To the bottom
Au revoir—Farewell till we meet again
Billet doux—A love letter
Bizarre—Odd; fantastic
Blase—Surfeited

Bonhomie—Good-natured simplicity
Bon jour—Good-day
Bon mot—A witticism
Bonne foi—Gobd faith
Carte blanche—Full power
Chef-d'œuvre—A master-piece
Comme il faut—As it should be
Contretemps—An awkward mishap
Coup d'état—A stroke of policy
Coup d'œil—A glance
Coûte qu'il coûte—Let it cost what it may
Cuisine—A kitchen
Début—First appearance
Eclat—Splendor
Elite—A selected body of persons
Encore—Again
En masse—In a body
En route—On the way
Ensemble—The whole
Entre nous—Between ourselves
Esprit de corps—The animating spirit of a collective body
Faux pas—A false step
Fête—A holiday
Garçon—A boy
Gardez bien—Take care
Gens d'armes—Armed police
Jeu d'esprit—A witticism
Littérateur—A literary man
Mauvais goût—Bad taste
Naïve—Having unaffected simplicity
Née—Born
Négligé—Undressed
Noblesse oblige—Rank imposes obligation
Nom de plume—An assumed name
On dit—They say
Pas à pas—Step by step
Passé—Worn out
Patois—Dialect of the lower classes
Protégé—One protected by another
Qui vive?—Who goes there
Resumé—A summing up
Rôle—A part in a performance
Savant—A man of science
Tant mieux—So much the better
Tête-à-tête—Face to face; in close conversation
Tout ensemble—The whole taken together
Valet de chambre—An attendant
Vis à vis—Facing
Vive le roi—Long live the king
Voilà—Behold; there is

RULES FOR CAPITALS.

Begin with a capital letter

I.—The first word of every sentence.

II.—The first word of every line of poetry.

III.—The first word of every direct quotation.

IV.—Proper nouns and words derived from proper nouns.

V.—Names and titles of Deity.

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RULES FOR PLURALS.

I.—Most nouns form plurals by adding *s*.

II.—Nouns uniting with sounds represented by *s* form plurals by adding *es*.

III.—Nouns ending in *y* preceded by a consonant change *y* to *i* and add *es*.

IV.—Some nouns ending in *f* or *fe*, change *f* or *fe* to *v* and add *es*.

V.—Letters, figures, and other characters are made plural by adding apostrophe (') and *s*.

RULES FOR SUFFIXES.

I.—Some words ending in *e* drop the *e* before taking a suffix beginning with a vowel.

II.—Monosyllables and words accented on last syllable, ending in a consonant preceded by a vowel, double the consonant before taking a suffix beginning with a vowel.

III.—Final *y* preceded by a consonant is changed to *i* unless the suffix begins with *i*.

RULES FOR POSSESSIVES.

I.—All nouns in the singular and all plurals not ending in *s* form their possessives by adding apostrophe (') and *s*.

II.—Plurals ending in *s* add the apostrophe (') only.

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